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NAVAL POSTGRADUATE SCHOOL

Monterey, California

TRENDS IN REGIONAL PATTERNS OF MIGRATION, IMMIGRATION, AND ECONOMIC ACTIVITY: IMPLICATIONS FOR ARMY RECRUITING

Michael J. Greenwood
and
Stephen L. Mehay

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NAVAL POSTGRADUATE SCHOOL
Monterey, California

RADM. R. W. West, Jr.
Superintendent

Harrison Shull
Provost

The report was prepared for U.S. Army Recruiting Command, Program Analysis and Evaluation Directorate, Research and Studies Division

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This report tracks historical trends in regional migration and economic conditions and the link with Army recruiting patterns. Future projections of regional papulation, migration, and economic activity are also presented. A third area of analysis is the impact of foreign immigration on reginal markets is analyzed. Finelly, the likely impacts of projected changes in regional recruiting markets on Army recruiting prospects are assessed.

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I. INTRODUCTION

Regional fluctuations in enlistments have been a feature of the Army recruiting landscape since the beginning of the all-volunteer era. These fluctuations, caused principally by economic and demographic changes, have triggered frequent shifts in recruiting policies. For the Active Components, the geographic distribution of recruiters and the assignment of mission to recruiters are examples of policies that are based on each region's potential as a source of new recruits. For the Reserve Components, geographic differences in market potential are even more important for recruiting success: Recruiting activities by necessity are confined to areas in which Troop Program Units (TPUs) are located. Unlike the Active Army, however, Reserve recruiters cannot be shifted from market to market in response to changes in economic or demographic conditions. Persistent shortfalls can be solved only by more drastic policies of relocating existing Reserve TPUs away from areas with poor market potential or by assigning increased authorizations to units in areas with high market potential.

Manpower supply models have long been used to analyze regional factors that affect enlistment levels, and have been used to forecast future enlistments on the basis of projected changes in those factors. Such forecasts allow the Recruiting Command to anticipate shifts in markets that might cause potential recruiting shortfalls and to implement policies to counter such shifts. These models normally include measures of regional economic conditions, such as unemployment and civilian youth wages, and demographic conditions, such as the population of recruitable youth. Recent models have attempted to incorporate measures of regional "propensity" in an effort to capture the underlying attitude toward military service within a region.[1]

The strength of manpower supply models rests on their ability to forecast the short-term environment. They are most accurate in making short-term forecasts because regional unemployment and wage projections are reliable only in the near-term. Similarly, the estimated coefficients of such models can be safely assumed to remain fixed only for a short period in the

[1]See Kearl, et al. (1990). On-going research at USAREC is also attempting to estimate the proportion of a region's youth population that is mentally qualified for military service, and to forecast these figures into the 21st century.

future. Thus, econometric supply models cannot be used to make reliable mid- to long-term enlistment forecasts.

The purpose of this report is to evaluate trends in regional recruiting markets for the 1990s and into the 21st century. The report attempts to identify important regional population trends, analyze their causes, and project future directions. The paper focuses on several key factors that influence population changes: Economic and employment conditions; migration patterns; and immigration. Changes in economic factors affect labor market conditions in a region, and thereby indirectly affect recruiting potential. By changing the quantity and quality of the recruitable population, migration and immigration affect recruiting directly; by influencing wage and employment levels in regional youth labor markets, migration and immigration also affect recruiting indirectly.

During the 1970s an unprecedented shift occurred in the regional distribution of U.S. population. Between 1970 and 1980 the nation's population grew from 203.3 to 226.5 million, or by 23.2 million persons. As Table 1 shows, of these incremental residents 20.9 million, or 90 percent, accrued to the South and West Census regions. The previous historical high percentage of incremental national population accounted for by the South and West was 65 percent during the 1930s. During the 1960s these regions accounted for only 61 percent of incremental national population.

The first half of the 1980s saw a continuation and even a slight acceleration of the regional population shift. The nation's population is estimated to have grown by 12.2 million during the 1980–85 period with over 91 percent of the incremental residents accruing to the South and West Census regions.[2] However, during the latter half of the 1980s the shift began to slow, as indicated by the fact that during the entire decade the South and West accounted for 87.7 percent of the nation's incremental population of 23.1 million persons (Table 1). Although dramatic regional shifts of population and employment have been occurring for some time and appear to be well-established, a major theme of this paper is that they are not likely to continue in the future at a pace that rivals that of the 1970s and 1980s.

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[2]U.S. Bureau of the Census (1986), Table No. 27.

TABLE 1. POPULATION OF THE UNITED STATES AND CENSUS REGIONS, 1979 AND 1980 (thousands)

Region	1990	Change 1980	Change 1970	1980–1990	1970–1980
United States	249,633	226,546	203,302	23,087	23,244
Northeast	50,961	49,135	49,061	1,826	75
Midwest	59,878	58,866	56,590	1,012	2,275
South	85,833	75,372	62,812	10,461	12,559
West	52,961	43,172	34,838	9,789	8,334

Source: U.S. Bureau of the Census, *Statistical Abtract of the United States: 1987* (107th edition). Washington, DC, 1986, Table No. 24, for 1970 and 1980 data. Data for 1990 are preliminary.

Regional economic and demographic change obviously occur within a national system, and many forces that are national in scope (not to speak of those that are international) clearly influence patterns of regional change. Moreover, trends in interregional population growth and migration tend to be long-term in nature. Thus, some knowledge of historical patterns is necessary as a benchmark to identify current trends and as a base from which to forecast future directions.

The paper begins with a brief discussion of some important national forces that have influenced regional change since about 1970. Broad patterns of regional employment and population change are described, with special emphasis on the behavior of key variables during the 1970–1985 period relative to the 1950–1970 period. In distinguishing the period from about 1970, particular attention is paid to inter-regional migration patterns. These patterns are related to the maturing of the baby boom through highly mobile age classes, which was a national phenomenon of considerable importance.

A second type of national migration pattern that is of great and increasing importance is immigration. Immigration affects total population levels, as well as the regional and age distribution of the population. The paper treats immigration in some detail, with an emphasis on the regional distribution of both the existing stock of immigrants as well as new immigrants.

The paper also details shifts in Army regional recruiting patterns, within the context of regional population and migration shifts. It should be pointed out that boundaries of the five Army Recruiting Brigades are similar, but not identical, to the four major census regions. Thus, many of the observations and conclusions made with respect to changes in census regions will also apply directly to Brigades (Defense Manpower Data Center, 1991). Various economic and demographic trends that promise to contribute to a moderating of regional discrepancies in rates of employment and population growth are also reviewed. Finally, forecasts of future regional population, migration, employment, and economic growth are presented and analyzed with respect to their implications for Army recruiting over the next decades.

It is important to emphasize that the ebb and flow of regional population and economic activity affect both the Active and Reserve Components, with perhaps the greater direct effect on recruiting for the Reserves and the maintenance of Reserve unit fill rates. For example, the collapse of the Northeast region as a recruiting market during much of the 1980s affected both components, but the Reserves more so than the Active Army because of the fixed manpower requirements associated with the immobile Reserve units located in that region. A second point is that many regional changes, especially those associated with demographic shifts, can be anticipated well in advance of their occurrence. One objective of this paper is to profile trends in the regional distribution of population and economic activity that will affect future recruiting. An understanding of the direction and magnitude of regional demographic and economic trends is necessary so that National recruitment strategies may be devised.

II. NATIONAL FORCES AFFECTING THE SPATIAL DISTRIBUTION OF POPULATION AND ECONOMIC ACTIVITY

The emergence of several broad national forces during the 1970s had important implications for the spatial distribution of economic activity and population in the United States. Compared to the 1960s, during the 1970s national labor supply grew rapidly, both relatively and absolutely, as young people and women entered the labor force. Several national economic events also characterized the 1970s, such as the energy crisis early in the period, a deep recession during 1974–75, and inflation and severe international competition through much of the decade. Partially as a cause and partially as a consequence of these events, the industrial composition of employment changed sharply away from manufacturing and toward service activities.

During the seventies national labor supply grew at an annualized rate of 2.5 percent, whereas during the 1960s labor supply grew at an annualized rate of 1.7 percent. The annualized rate of growth during the 1970s was more than twice that of 1950s and almost 44 percent higher than that of the 1960s. Better than 10 million more labor force members were absorbed into the U.S. labor market during the 1970s than during the 1960s. Three immediate causes underlie the substantial labor force increase of the seventies: (1) The aging of the baby-boom cohort into the labor force, which began during the mid 1960s and continued through the 1970s; (2) Female labor force participation rates, which increased considerably during the 1960s, increased even more substantially during the 1970s; and (3) Legal immigration, which consists of relatively many young adults, approached all time historic high levels during the 1970s and 1980s, and due to economic conditions in Mexico and the Caribbean, illegal immigration probably increased substantially also.

The quadrupling of oil prices in 1973 was a severe shock to the economy at the very time it was undergoing continued dislocations and reallocations brought on by post-Vietnam adjustments. Moreover, the recession of 1974–75 was then the most severe of the post-World War II period, and the national unemployment rate soared from 5.0 percent to 9.2 percent in one year. Serious inflation accompanied high unemployment rates. Furthermore, foreign competition, especially in steel and automobiles, had important implications for the national economy, as well as for various regional economies. The

recession of the early 1980s was even more severe than that of the mid 1970s and particularly affected the Midwest region.

The industrial composition of U.S. employment has been changing for some time, but the 1970s brought dramatic new elements to this change. Employment in the manufacturing sector was almost stagnant during the decade, and the rate of growth of government employment fell sharply. On the other hand, due primarily to the energy crisis, during the 1970s the mining sector reversed a long-term downward trend and grew more rapidly than any other sector, which contributed to a resurgence of nonmetropolitan America. During the 1980s the fortunes of the mining sector again turned downward, especially but not limited to oil and gas exploration and extraction. Interstate and intra-county rates of mobility also declined somewhat during the 1970s, especially among young people. One of the most important causes of decreased rates of movement was probably the continued fall in marriage rates of the young. Among other factors, a desire on the part of women, at least relative to their mothers, to decrease the number of children they bear and to postpone fertility has probably caused the marriage rate to fall. These desires are likely to be tied to increased female labor force participation and labor force attachment.

III. INTERREGIONAL SHIFTS IN THE LOCATION OF EMPLOYMENT AND POPULATION

Since approximately 1970, trends in the spatial distribution of economic activity and of population in the United States have changed dramatically. As Table 2 shows, in 1970, the South and West held about 45 percent of the nation's nonagricultural employment, but during the 1970s these regions accounted for almost 73 percent of the nation's incremental employment of this type. Conversely, the Northeast and Midwest held about 55 percent of national nonagricultural employment in 1970, but accounted for only 27 percent of incremental national employment. During the early 1980s, moreover, the Northeast and especially the Midwest experienced sizeable absolute

TABLE 2. ABSOLUTE NONAGRICULTURAL EMPLOYMENT CHANGE AND SHARES OF ABSOLUTE NONAGRICULTURAL EMPLOYMENT CHANGE, BY CENSUS DIVISION, 1950–1980

	Absolute Employment Change (in thousands)				Shares of Absolute Employment Change			
Region/ Division	1950–1960	1960–1970	1970–1980	1980–1988	1950–1960	1960–1970	1970–1980	1980–1988
Northeast	**1,390.0**	**3,046.0**	**1,843.4**	**3,338.0**	**15.3%**	**18.2%**	**9.2%**	**16.9%**
New England	353.1	845.4	937.8	1,118.9	3.9	5.0	4.7	5.7
Middle Atlantic	1,036.9	2,200.6	905.6	2,220.0	11.4	13.1	4.5	11.2
Midwest	**1,860.4**	**4,116.2**	**3,681.5**	**3,731.5**	**20.5**	**24.5**	**18.3**	**18.9**
E. N. Central	1,274.9	2,950.2	2,134.6	2,478.9	14.0	17.6	10.6	12.6
W. N. Central	585.5	1,166.0	1,546.9	1,252.6	6.5	7.0	7.7	6.3
South	**3,095.5**	**6,161.8**	**8,745.8**	**7,463.1**	**34.1**	**36.7**	**43.6**	**37.8**
South Atlantic	1,648.7	3,405.8	4,075.8	4,060.6	18.2	20.3	20.3	20.6
E. S. Central	512.4	1,065.9	1,317.2	1,215.0	5.6	6.4	6.6	6.2
W. S. Central	934.4	1,690.1	3,352.8	2,187.5	10.3	10.1	16.7	11.0
West	**2,729.0**	**3,450.2**	**5,795.0**	**5,184.4**	**30.1**	**20.6**	**28.9**	**26.3**
Mountain	596.5	789.7	1,839.3	1,365.2	6.6	4.7	9.2	6.9
Pacific	2,132.5	2,660.5	3,955.7	3,829.2	23.5	15.9	19.7	19.4
United States	**9,074.9**	**16,774.2**	**20,065.7**	**19,717.0**	**100.0**	**100.0**	**100.0**	**100.0**

Sources: Calculated from data presented in U.S. Department of Labor, Bureau of Labor Statistics, *Handbook of Labor Statistics* (Washington, DC: U.S. Government Printing Office, 1985, 1989).

declines in their nonagricultural employment base. The manufacturing sectors of these regions were hit particularly hard by the recessionary conditions of the early 1980s, but the rising U.S. dollar and increased foreign competition also hurt. Since manufacturing is heavily concentrated in the metropolitan areas of the Northeast and Midwest, these areas were particularly touched by national economic conditions.

Data on the location of nonagricultural employment in Table 2 clearly document the extent of the interregional redistribution of jobs since 1950. In certain respects, moreover, the shift out of the Northeast and Midwest appears to have accelerated after 1970, due in part to the serious effects that the recession of the early 1980s had in these regions and in part to the fact that the 1960s was a period of notable prosperity for them.

In the Northeast and Midwest employment grew somewhat less rapidly during the 1970s than during the 1960s. The Northeast had an annualized rate of growth during the 1970s (0.9 percent) that was only 50 percent of that during the 1960s, and the Midwest had a rate (1.7 percent) only about 74 percent as high. During each period the South grew at almost the same rate (3.7 percent in the 1960s and 3.6 percent in the 1970s), whereas the West's rate of growth increased by 17 percent during the 1970s (to 4.1 percent).

Relative to the South and West, the employment performance of the Northeast and Midwest deteriorated badly during the 1970s. Let us take the most rapidly growing region as the benchmark for each period, which during the 1960s was the South (3.7 percent annualized rate) and during the 1970s was the West (4.1 percent). The Northeast grew 49 percent as fast as the South during the 1960s, but only 22 percent as fast as the West during the 1970s. The Midwest grew 62 percent as fast as the South during the 1960s and 41 percent as fast as the West during the 1970s. During the 1950s the West was the most rapidly growing region (4.0 percent annualized rate), and the Northeast grew at about 23 percent of its rate, whereas the Midwest region grew at 33 percent of this rate. Hence, as far as the Northeast and Midwest are concerned, the 1960s appears to have been an abnormal period during which employment grew relatively fast compared to other periods although still slowly compared to other regions.

Viewed from the perspective of shares of national employment and of national incremental employment, the performance of the Northeast and Midwest clearly deteriorated in the 1970s relative to both the 1960s and the

1950s. During the 1950s the Northeast experienced a 2.7 percentage point drop in its share of national employment; during the 1960s the share dropped by 2.5 percentage points; and during the 1970s it fell by 3.8 percentage points. The Northeast accounted for only 9.2 percent of incremental national employment during the 1970s compared to 15.3 percent and 18.2 percent during the prior two decades, respectively (Table 2). The Middle Atlantic and East North Central divisions were particularly affected during the seventies.

Qualitatively similar observations apply to the Midwest, which had a 1.8 percentage point drop in its share of national nonagricultural employment in the 1950s, a 1.1 percentage point drop during the 1960s, and a 2.2 percentage point drop during the 1970s. Respective shares of national incremental employment accruing to the Midwest during the three decades are 20.5 percent, 24.5 percent, and 18.3 percent (Table 2).

After the recession of 1981–1982, the remainder of the 1980s experienced a major prolonged economic expansion. Employment gains, however, were distributed unevenly across regions. Table 2 shows that a dramatic resurgence in employment occurred in the Northeast during the middle and late 1980s—its share of the change in national nonagricultural employment from 1980 to 1988 was 16.9 percent, almost equal to its share in the 1960s. This employment growth was fueled by changes in the Middle Atlantic states of New York, New Jersey, and Pennsylvania, which nearly tripled their employment growth shares. By contrast, the Midwest merely maintained its relative employment position during the 1980–1988 period. The share of national incremental employment fell in both the South and West during the 1980s. The largest drop occurred in the West South Central division, with only the South Atlantic showing a small increase.

Changes in the relative fortunes of each area are attributable to somewhat different factors. In the West South Central and Mountain divisions the reduction in employment growth was attributable to falling energy prices and the subsequent drop in the mining industry, especially in oil and gas extraction. Employment in oil and gas extraction rose to an all-time peak in 1982, only to drop to an all-time low in 1987. The Middle Atlantic states (especially New York and New Jersey) benefitted from the buildup in financial services, transportation services, and retailing. New England benefitted from its diverse manufacturing base. In Massachusetts, growth occurred in high-technology durable goods industries, while Rhode Island witnessed a

resurgence of traditional, low-wage nondurable goods industries such as apparel and jewelry.[3]

Much of the rhetoric about the relative growth of the "sunbelt" compared to the "snowbelt" evokes images of mass migration of firms from the Northeast and Midwest to the South and the West. Allaman and Birch (1975) show that this characterization is not accurate. Net changes in employment within regions are relatively small, but the changes are accounted for by relatively large amounts of offsetting activity. Of particular significance is the fact that interstate migration of firms appears to be of little quantitative importance in determining employment change. Furthermore, deaths and contractions of firms appear to be uniform across regions as well as across rapid-growth compared to slow-growth states. The implication, therefore, is that the birth of new firms and the expansion of existing firms are responsible for the differential rates of employment growth in the South and the West relative to the Northeast and Midwest.[4]

The manufacturing sector has for some years had a rate of employment growth well below the national average growth rate. During the 1970s, however, the relative performance of manufacturing employment slipped badly compared to the previous two decades when it grew at an annualized rate about 53 percent that of total nonagricultural employment; during the 1970s it grew at only about 19 percent of this overall rate. Since manufacturing activity has historically been concentrated in the Northeast and Midwest, these regions were particularly affected by the performance of this sector. Between 1950 and 1980 the share of national manufacturing employment

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[3]Regional employment patterns are traced in Devens (1988) and Rones (1986).

[4]Several general hypotheses have been offered to explain the differentially high rates of births and expansions of firms in the South and West compared to the rest of the United States. Some have argued that the capital stock in the Northeast and Midwest regions is older, embodies outdated technology, and is increasingly uncompetitive with newer capital. However, this phenomenon may be an effect of differential rates of return among regions rather than a cause. The costs of doing business in the South and West are also argued to be falling because of improvements in transportation and communications. Most importantly, population migration accompanying (and partly causing) the regional shift in employment provides reinforcement by increasing final demands and simultaneously increasing supplies of labor. Thus, a process of cumulative causation is operating wherein employment growth is itself responsible for additional employment growth as markets are geographically shifted to the South and the West.

accounted for by the Northeast and Midwest fell from 72.1 percent to 54.8 percent.

What particularly distinguishes the 1970s is that manufacturing employment declined absolutely in the Northeast and Midwest. The decline amounted to about 529,000 jobs in the Northeast and 193,000 in the Midwest. During the 1960s, while declining relatively, northeastern and midwestern manufacturing employment grew by 787,000 jobs, of which 762,000 were in the latter region. In the South and West this sector grew by almost as much during the 1970s (1.7 million jobs) as during the 1960s (1.8 million jobs).

The long-term trends in the locus of manufacturing employment have been attributed to a number of factors. Among those generally regarded as important are the growth of markets, lack of unionization, relatively low wages, and climatological amenities in the South and West. The intensification of foreign competition during the 1970s, especially in steel and in automobiles, also had greater effects in certain regions than in others. Whereas these factors may not favor the South and West as much in the future as they have in the past, they should continue to be of some importance.

IV. REGIONAL REDISTRIBUTION OF POPULATION

The simultaneity between population change and employment change is well-established in the migration literature (Greenwood, 1975). The regional redistribution of population is expected, therefore, to generally mirror the employment trends already described. Although a close association is frequently found between employment change and population change, the exact relationship between these variables is affected by other factors, such as regional differences in the migrant-attractive power of an incremental job and the local labor force participation response to employment change. Greenwood and Hunt (1984) show that the migrant-attractive power of an additional job is greater in the South and West than in the Northeast and Midwest, with the difference amounting to about one extra migrant per ten extra jobs.

Moreover, areas with relatively low labor force participation rates have correspondingly high potential to accommodate employment growth from the local population. Thus, low participation rates, as reflected in low employment-to- population ratios, serve as a buffer between employment growth and migration. This relationship, which appears to have characterized the South during the 1970s, is described in greater detail later in this paper.

During the 1970s total population growth was largest, in absolute terms, in the South, followed by the West (Table 1). In percentage terms, however, the West increased in population by nearly 24 percent from 1970 to 1980, whereas the South increased by almost 20 percent. Population growth in the Midwest was only 4.0 percent, and the population of the Northeast remained nearly constant over the decade. Based on preliminary figures from the 1990 census, the West's population grew by 22.7 percent during the 1980s, followed by the South at 13.9 percent. The Northeast grew by 3.7 percent and the Midwest by 1.7 percent (Table 1).

In a definitional sense, two sources of the regional population shift can usefully be identified—natural increase and migration. Let us consider the magnitude of each source as they affected regional population change during the 1970s.

A. NATURAL INCREASE

As shown in Table 3, natural increase accounted for almost 40 percent of the 20.9 million incremental residents that accrued to the South and West

during the 1970s, and over 50 percent during the 1980–88 period. Although natural increase contributed positively to population growth in each region, the rate of natural increase was differentially high in the South and West. This rate exceeded nine percent in the West, was between six and eight percent in the South, between five and six percent in the Midwest, and barely exceeded three percent in the Northeast (Table 3). Interdivisional differences in birth rates particularly stand out, with substantial differences existing between the division with the highest and that with the lowest rate. For example, in June, 1982, among women 18 to 44 years old, those in the Mountain division had 90.7 births per thousand compared to 60.6 births per thousand for those in the Middle Atlantic division.[5]

TABLE 3. COMPONENTS OF POPULATION CHANGE BY REGION, 1970–1980 AND 1980–1988 (thousands)

	Absolute Change	Births	Deaths	Net Migration	Absolute Change as Percent of 1970/1980 Population	Natural Increase as Percent of 1970/1980 Population	Net-Migration as Percent of 1970/1980 Population
	1970-1980[a]						
Northeast	75	6,661	4,750	-2,888	0.2%	3.9%	-5.9%
Midwest	2,275	9,032	5,308	-2,703	4.0	6.6	-4.8
South	12,559	11,221	6,210	5,992	20.0	8.0	9.5
West	8,334	6,330	3,010	4,115	23.9	9.5	11.8
	1980-1988						
Northeast	1,459	5,712	3,948	-306	2.9%	3.6%	-0.6%
Midwest	1,012	7,527	4,355	-2,159	1.7	5.4	-3.7
South	9,283	10,529	5,756	4,511	12.3	6.3	6.0
West	7,506	6,826	2,861	3,540	17.4	9.2	8.2

Sources: U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1053, "Projections of the Population of States by Age, Sex, and Race: 1989 to 2010," (Washington, D.C.: U.S. Government Printing Office, 1987), Table 5.

[a]Note that for the 1970–1980 period absolute population change does not equal births minus deaths plus (negative) net migration. The difference is the "error or closure," or the unexplained difference between the estimated population at the end of the decade and the census count for that date.

[5]U.S. Bureau of the Census (1983), Table B.

Several factors help account for the higher rates of natural increase in the South and West. Religious and ethnic concentrations favor higher birth rates in many areas of the West and Southwest, and a favorable age structure of their populations also favors higher birth rates. The Northeast, in particular, has an older population than the other three regions. In 1980, for example, 33.8 percent of the population of the Northeast was 45 years old or older, while the corresponding percentages were 30.9 percent for the Midwest, 30.4 percent for the South, and 28.6 percent for the West. Correspondingly, the West has a somewhat higher percentage of its population in the young, childbearing years. In the West, 43.3 percent of the 1980 population was between 18 and 44 years of age, compared to 40.9 percent in the South, 40.4 percent in the Midwest, and 39.6 percent in the Northeast.[6] Insofar as migration is selective of younger age groups, the future contribution of natural increase to population growth in the Northeast and Midwest can be expected to deteriorate even further relative to the regions receiving substantial numbers of in-migrants. However, as the baby boom matures out of the ages most commonly associated with fertility, even the differential rates of natural increase will probably moderate.

B. INTERNAL MIGRATION

Migration to the South and West has been from two sources—net internal migration and immigration. Within the U.S. internal migration is a zero-sum game. Thus, migrants gained by one region must be lost by another. Table 4 more clearly identifies the direction and magnitude of internal migration in the United States, including both the reversal of southern net out-migration and the increased net migration out of the Northeast and Midwest. Not shown in the table is the fact that prior to the turnaround the South experienced persistent net out-migration. For example, for 14 of the 16 years between 1953 and 1968 migration was out of the South. In 8 of these 16 years this region lost over 200,000 net migrants and in one year alone lost over 400,000. Although the South experienced some net in-migration between 1965 and 1970, the volume nearly tripled during each of the following five-year periods. Hence, net in-migration to the South now seems firmly established.

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[6]U.S. Bureau of the Census (1981c), Table No. 31.

TABLE 4. IN-MIGRATION, OUT-MIGRATION, AND NET-MIGRATION FOR REGIONS: 1955–1960, 1965–1970, 1970–1975, 1975–1980, AND 1980–1985 (of persons 5 and over in thousands)

Region	1955-60	1965-70	1970-75	1975-80	1980-85
Northeast					
In-Migrants	1,044	1,273	1,057	1,106	1,218
Out-Migrants	1,683	1,988	2,399	2,592	2,240
Net-Migrants	-639	-715	-1,342	-1,486	-1,022
Midwest					
In-Migrants	1,702	2,024	1,731	1,993	1,901
Out-Migrants	2,545	2,661	2,926	3,166	3,426
Net-Migrants	-842	637	-1,195	-1,173	-1,525
South					
In-Migrants	2,490	3,142	4,082	4,204	4,428
Out-Migrants	2,435	2,486	2,253	2,440	2,530
Net-Migrants	+ 56	+656	+1,829	+1,764	+1,898
West					
In-Migrants	2,488	2,309	2,347	2,838	2,641
Out-Migrants	1,062	1,613	1,639	1,945	1,992
Net-Migrants	+1,426	+696	+708	+893	+649

Source: U.S. Bureau of the Census, *Current Population Reports*, Series P-20, No. 420, "Geographical Mobility: 1985," (Washington, DC: U.S. Government Printing Office, 1987), Table G.

The most recent annual migration data are presented in Table 5. During the last five years of the 1980s, for which data are available, the Northeast and Midwest continued to experience a net loss of migrants to other regions. The South and West had net gains in every year. The only exception to this pattern was the West, which experienced a net loss of migrants during the 1983–84 period.

During the 1970s the South gained about two new migrants for every one gained by the West; during the 1980s this ratio rose to three to one. Net out-migration from the Northeast and Midwest nearly doubled between the late 1960s and both the early and the late 1970s. This increased net out-migration reflects the weak employment performance of these regions during the 1970s; the feedback effects of the net out-migration further reduced their employment performance. Net out-migration slackened somewhat in the

TABLE 5. ANNUAL IN-MIGRATION, OUT-MIGRATION AND NET MIGRATION FOR REGIONS: 1982–1987 (in thousands)

Region	1982–83	1983–84	1984–85	1985–86	1986–87
Northeast					
In-Migrants	439	487	482	502	398
Out-Migrants	625	578	691	752	732
Net-Migrants	-186	-91	-209	-250	-334
Midwest					
In-Migrants	661	820	842	1,011	858
Out-Migrants	947	1,102	1,053	996	969
Net Migrants	-286	-282	-211	+15	-111
South					
In-Migrants	1,211	1,399	1,329	1,355	1,374
Out-Migrants	973	973	1,169	1,320	1,095
Net Migrants	+238	+426	+160	+35	+279
West					
In-Migrants	880	834	994	910	916
Out-Migrants	645	887	734	710	750
Net Migrants	+235	-53	+260	+200	+166

Source: U.S. Bureau of the Census, *Current Population Reports*, Series P-20, No. 430, "Geographical Mobility: March 1986 to March 1987," (Washington, DC: U.S. Government Printing Office, 1989), Table F.

Northeast in the early 1980s as its economy improved, but out-migration continued to rise in the Midwest. Increased out-migration from the Northeast and Midwest and increased in-migration to the South were thus largely responsible for internal migration's impact on inter-regional population redistribution during the 1970s and 1980s compared to the 1960s.

As measured by the residual method, the South's net migration amounted to 5.99 million during the 1970s and 4.5 million between 1980 and 1988. By comparison, net migration in the West amounted to 4.12 million in the 1970s and 3.5 million during the 1980–88 period (Table 3). These figures refer to both internal and international migration, which together accounted for about one half of the incremental population of the South and West during the last two decades.

Migration is strongly correlated with age. As Table 6 shows, migration propensities peak at about 25 years of age, then decline sharply at older ages. Although within any given age class migration propensities are generally

higher for those with more education, this tendency for the propensity to migrate to fall with age holds across all levels of education. Interstate migration propensities for those 25 to 29 years old range from about 2.0 to about 3.5 times the propensities of those 45 to 64 years old, depending upon education. The second highest migration propensities are observed for those in the 18–24 age range, the prime recruiting years for the military.

TABLE 6. PROPENSITIES TO MIGRATE INTERSTATE, 1975–1980 AND 1980–1985, BY AGE AND EDUCATION

		Age[a]				
Education	Years	8 –24	25–29	30–34	35–44	45–64
		1975–80				
Elementary	0–8	7.81%	10.47%	7.57%	5.07%	3.88%
High School	1–3	10.02	13.87	10.25	6.51	4.31
	4	10.77	13.60	10.62	7.27	4.56
College	1–3	12.40	17.53	15.36	12.76	8.44
	4	21.83	24.56	18.76	12.89	6.95
	5+	28.62	32.09	24.82	16.92	9.06
		1980–85				
Elementary	0–8	8.21	7.02	6.74	4.37	3.78
High School	1–3	9.33	12.50	9.30	5.61	3.94
	4	11.31	13.10	9.83	7.33	4.84
College	1–3	10.12	15.67	11.60	10.75	6.84
	4	24.13	25.32	16.54	12.97	7.19
	5+	29.04	32.24	21.67	14.06	7.71

Source: U.S. Bureau of the Census, Current Population Reports, Series P-20, No. 368, "Geographical Mobility: March 1975 to March 1980," (Washington, D.C.: U.S. Government Printing Office, 1981), Table 24, and No. 420, "Geographical Mobility: 1985," (Washington, DC: U.S. Government Printing Office, 1987), Table 17.

[a]The base population is the relevant number of nonmovers over the 1975 to 1980 (1980 to 1985) period, plus out-migrants. Age is defined as of 1980 (1985).

Between the late 1960s and the late 1970s the volume of inter-regional migration increased by about 16 percent (from 8.7 million between 1965 and 1970 to 9.2 million between 1970 and 1975 to 10.1 million between 1975 and 1980). This increase was due neither to a general increase in the volume of interstate migration nor to an increase in the propensity to migrate between states.

The evidence clearly points to the maturing of the baby boom through the most mobile age classes as a major factor contributing to migration to the South and West during the 1970s and early 1980s. Table 7 shows the age distribution of the nation's population in 1960, 1970, and 1980, and it also shows the absolute change in each age class during the 1960s and the 1970s. Note that during the 1960s the earliest baby boom cohorts were beginning to move into their twenties. During this decade the population aged 20 to 39 increased by about 6.3 million. However, during the 1970s, as the baby boom displaced the relatively small cohort born during the 1930s in this age class, the population aged 20 to 39 grew by 20.0 million. Consequently, an enormous increase occurred in the size of the population with the highest propensities to make an interstate move.

In itself, such an increase need not have caused the observed levels of interregional migration because in addition to a propensity to move, the young baby boom population must also have had an incentive to move. Economic incentives clearly existed. As pointed out above, during the 1970s nearly 73 percent of the nation's incremental nonagricultural jobs (20.1 million) accrued to the South and West (Table 2). Like its population counterpart, this figure differs substantially from the corresponding figure for the 1960s (57.3 percent). During the 1950s the South and West accounted for 64.1 percent of incremental national nonagricultural employment. Hence, during the 1970s job prospects were considerably better in these regions than in the Northeast and Midwest. Since unemployment rates also tend to be considerably higher among those in their twenties than those in their forties, this added incentive existed for the baby boom population to move out of the Northeast and Midwest regions where job prospects were relatively poor and the prospects for unemployment were relatively high and to the South and

West where an opposite set of circumstances existed.[7] The very size of the baby boom itself may also have contributed to higher unemployment rates for its members.

TABLE 7. AGE STRUCTURE OF THE U.S. POPULATION: 1960, 1970, AND 1980

	Number			Absolute Change	
Age	1960	1970	1980	1960–70	1970–80
All ages	179,323	203,212	226,546	23,889	23,334
Under 5	20,321	17,154	16,348	-3,167	-806
5 – 9	18,692	19,956	16,700	1,264	-3,256
10 – 14	16,773	20,789	18,242	4,016	-2,547
15 – 19	13,219	19,070	21,168	5,851	2,098
20 – 24	10,801	16,371	21,319	5,570	4,948
25 – 29	10,869	13,477	19,521	2,608	6,044
30 – 34	11,949	11,430	17,561	-519	6,131
35 – 39	12,481	11,107	13,965	-1,374	2,858
40 – 44	11,600	11,981	11,669	381	-312
45 – 49	10,879	12,116	11,090	1,237	-1,026
50 – 54	9,606	11,104	11,710	1,498	606
55 – 59	8,430	9,973	11,615	1,543	1,642
60 – 64	7,142	8,617	10,088	1,475	1,471
65 – 69	6,258	6,992	8,782	734	1,790
70 – 74	4,739	5,444	6,798	705	1,354
75 and over	5,563	7,630	9,969	2,067	2,339
Median	29.5	28.1	30.0	—	—

Sources: U.S. Bureau of the Census, *1980 Census of Population*. Volume 1, *Characteristics of the Population*, PC80-1, (Washington, D.C.: U.S. Government Printing Office, 1981), Table 44; and U.S. Bureau of the Census, 1970 Census of Population. Volume 1, *Characteristics of the Population*, Part 1, United States Summary—Section 1 (Washington, D.C.: U.S. Government Printing Office, 1973), Table 53.

[7]For example, in 1980 the average unemployment rate of persons 20 to 24 years of age (11.5 percent) was almost three times higher than that of persons 45 to 54 years of age (4.0 percent). Using micro data, DaVanzo (1978) shows that families whose heads are looking for work are more likely to move than families whose heads are not looking. Moreover, the unemployed are more likely to move than the employed.

However, during the 1960s and 1970s, the volume of interstate migration remained about the same and may have decreased slightly.[8] Perhaps of even greater importance, the propensity to make an interstate move declined substantially. For example, the propensity to make an annual interstate move fell from an average of 3.47 percent between 1965–66 and 1970–71 to 2.97 percent in 1975–76 and then to 2.80 percent in 1980–81. The propensity of young persons to migrate between states fell even more dramatically. For persons 20 to 24 years of age, this propensity fell from 9.38 percent in 1965-66 to 8.77 percent in 1970–71; it then fell from 6.83 percent in 1975–76 to 5.80 percent in 1980–81.[9] Thus, the 1980–81 figure for this relatively highly mobile age group was only about two-thirds as high as the 1970–71 figure.

When moves of all types are considered, the data reveals that the overall mobility of the population is decreasing. Through the decades of the 50s and 60s, about 20 percent of the population made a move of some type each year. By 1982, the rate fell to a low of 16.6 percent. Although mobility briefly reached 20 percent again in 1985, since then it has remained below 20 percent. The reduction in mobility is composed of decreases in moves over shorter distances (within counties) and over longer distances (between states), while movement over intermediate distances (between counties within a state) has remained steady. Demographers have not been able to fully explain this overall decline in mobility. Aging of the baby boom appears to be

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[8]Average annual levels of interstate migration (in thousands) are as follows: 1947-48 to 1949–50—4,330; 1950–51 to 1959–60—5,306; 1960–61 to 1969–70—6,121; and 1970–71 to 1979–80—6,168. However, the greatest volumes occurred during 1964–65 (6,597) and 1967–68 (6,607). Because during the 1970s annual migration data are available for only 1970–71 and 1975–76, the figure for the 1970s is not strictly comparable to that for the 1960s or earlier periods.

[9]Greenwood, Hunt, and McDowell (1986) show that migration propensities vary with national economic conditions, rising during upturns in economic activity and falling during downturns. Thus, the 1975–76 and 1980–81 figures reported here could have been affected by national recessions. The nature of the migration question asked in the Current Population Survey does not allow comparable information on one-year flows to be reported for the late 1970s. However, the question changed back to a one-year basis in the 1980s, and the results suggest that migration propensities remained low even after recovery from the recession of the early 1980s. For example, the figure for persons 20 to 24 years of age (for interstate migration) was 5.52 percent for 1984–85.

a factor, but other factors are also at work.[10] Nonetheless, this drop in mobility, especially of the youth population, and the contributing factors may have important implications for future recruiting.

The largest effect will be registered in the "graduate" market—the segment of the recruiting market consisting of youth no longer in school. This market will be less volatile and, because addresses will remain accurate for longer periods, recruiters will have an easier task in canvassing. Beyond this, however, the effect of declining mobility or recruitment of others, especially high school seniors, will be difficult to predict. For example, at the aggregate level, it is not known how changes in migration rates affect an area's recruiting potential. Similarly, at the micro-level, it is not known how individual or family mobility affects the enlistment propensity of youth. These topics should be high on the future research agenda.

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[10]See Larry Long, *Migration and Residential Mobility in the United States*. New York: Russell Sage Foundation, 1988, and his "Americans on the Move," *American Demographics*, June 1990, pp. 46–49.

V. REGIONAL RECRUITMENT PATTERNS

It is useful at this point to examine the historical pattern of military and Army recruiting in the context of the shifts in population, migration, and economic activity sketched above. Recall that population growth in the South and West occurred via both natural increase and net in-migration. Thus, not only did total population grow, the age structure also became more youthful in these regions. Table 8 shows the population in the 18–24 age group (numbers and percentages) for each major region between 1980 and 1990. Even though the total number of 18–24 year olds declined, the share of this age group residing in the South and West increased from 53 percent in 1980 to 56 percent in 1990.

TABLE 8. POPULATION 18–24 YEARS OLD BY REGION

	Thousands				Percent Distribution			
Region	1970	1980	1990	2000	1970	1980	1990	2000
Northeast	5,360	6,163	5,123	4,421	22.6%	20.5%	19.7%	17.7%
Midwest	6,444	7,872	6,112	5,535	27.2	26.2	23.6	22.1
South	7,634	10,066	9,248	9,226	32.2	33.5	35.7	36.9
West	4,278	5,921	5,415	5,806	18.0	19.7	20.9	23.2
Total	23,697	30,022	25,897	24,987	100.0	100.0	100.0	100.0

Source: U.S. Census Bureau, *Statistical Abstract of the United States: 1990*. Washington, DC, 1989.

As one might expect, the percentage contribution of the South and West to military accessions increased over this period. Table 9 provides details of the percent distribution of DOD non-prior service accessions by Census region and division, and compares this to the youth population distribution for selected years. These data reveal that the share of accessions from the South and West has grown from 56 percent in 1974 to around 60 percent in the late 1980s. The Northeast has experienced a pronounced drop in its enlistment share, from a peak of 22.2 percent in 1977 to only 14 percent in 1989.

TABLE 9. DISTRIBUTION OF DOD NON-PRIOR SERVICE ACCESSIONS AND YOUTH POPULATION (PERCENT), VARIOUS YEARS

Region/Division	1974		1977		1984		1989	
	Acces-ions	Youth Pop.	Acces-ions	Youth Pop.	Acces-ions	Youth Pop.	Acces-ions	Youth Pop.
Northeast	17.3	22.5	22.2	21.6	19.4	20.4	14.1	20.8
New England	4.5	5.5	6.0	5.3	4.8	5.4	3.2	5.5
Mid Atlantic	12.8	17.0	16.2	16.3	14.6	15.0	10.9	15.3
Midwest	25.5	28.1	26.5	26.6	28.1	24.5	25.9	24.9
E.N. Central	17.6	20.1	19.1	19.0	20.8	17.4	18.3	17.5
W.N. Central	7.9	8.1	7.4	7.6	7.3	7.1	7.6	7.4
South	36.9	31.1	32.3	32.6	33.9	33.8	40.2	33.6
S. Atlantic	17.6	14.8	16.7	16.1	18.4	16.4	18.8	16.4
E.S. Central	7.5	6.6	6.3	6.6	6.6	6.2	7.4	6.4
W.S. Central	11.8	9.7	9.3	9.9	8.9	10.8	14.0	10.7
West	19.3	16.8	18.1	17.6	17.2	18.2	19.6	20.6
Mountain	5.2	4.3	4.9	5.0	5.2	5.1	6.5	5.1
Pacific	14.1	12.5	13.2	12.6	12.0	13.8	13.1	15.5

Notes: a Youth population based on 17–21 year olds in 1974, 1977, and 1984; 18–24 year olds in 1989.

b Census Bureau changed "North Central" region to "Midwest" after 1984.

Sources: Office of Assistant Secretary of Defense (FM&P), *Population Representation in the Military Services*, various years.

These overall regional military recruitment patterns are repeated in Table 10 for the individual services. The fall in the percentage of enlistments from the Northeast is observed for all four branches, but is especially striking for the Navy. The South and West have increased their contribution to Navy enlistments by nearly 10 percentage points over this period. For the other services, the growth in recruiting in the South and West regions has been more modest, but still significant.

TABLE 10. NON-PRIOR SERVICE ACCESSIONS BY REGION BY SERVICE, 1979 TO 1989 (in percentages)

Branch/Region	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Army											
Northeast	26.4	28.3	26.0	24.0	28.2	24.6	25.2	24.5	22.6	20.2	20.0
Midwest	20.7	22.5	27.5	25.2	32.3	28.7	27.9	26.9	24.7	26.0	24.4
South	36.5	33.3	34.2	25.9	36.1	33.4	32.9	33.9	35.4	38.5	40.0
West	16.4	15.9	12.3	24.9	3.4	13.3	14.0	14.7	17.3	15.3	15.6
Navy											
Northeast	35.7	34.1	34.7	36.0	34.4	33.5	33.3	32.4	29.6	29.5	26.6
Midwest	25.8	27.0	28.2	28.7	27.6	28.1	27.5	27.1	28.1	28.5	27.0
South	19.9	18.8	18.4	17.7	19.1	18.8	19.9	19.6	20.5	21.1	25.3
West	18.6	20.1	18.7	17.6	18.9	19.6	19.3	20.9	21.8	20.9	21.1
Air Force											
Northeast	24.5	23.5	23.7	23.1	23.4	23.3	23.3	20.4	21.2	17.8	16.2
Midwest	28.6	29.6	28.7	29.7	29.6	28.9	29.9	27.0	25.7	24.5	25.3
South	31.1	31.0	31.3	30.4	30.7	30.9	31.1	31.5	33.2	36.9	36.1
West	15.8	15.9	16.3	16.8	16.3	16.9	15.7	21.1	19.9	20.8	22.4
Marine Corps											
Northeast	23.9	22.6	22.9	23.1	22.2	22.2	21.8	18.9	17.9	17.6	16.9
Midwest	22.9	24.7	25.7	26.9	27.4	28.5	26.8	27.4	26.4	26.8	25.8
South	35.7	35.2	32.8	33.6	32.3	32.0	33.5	35.3	37.7	37.0	38.4
West	17.5	17.5	18.6	16.4	18.1	17.3	17.9	18.4	18.0	18.6	18.9

Source: Provided by Defense Manpower Data Center (DMDC).

Table 11 reports the share of non-prior service accessions for the individual states for 1988. One important aspect of these state-level figures is the relatively greater reliance by the Army on the South as a source of enlistments. Furthermore, within the South the Army pulls a disproportionate share of enlistments from the South Atlantic division, and within this division enlistments are drawn disproportionately from the states of Virginia, North Carolina, Georgia, and Florida.

TABLE 11. ENLISTED ACCESSIONS BY STATE AND SERVICE: 1988 (in percentages)

Census Region/ Division/ State	Armed Forces	Army	Navy	Marine Corps	Air Force
North East Region	**15.5**	**13.2**	**16.7**	**17.2**	**17.1**
New England Division	*3.4*	*2.9*	*3.4*	*4.0*	*4.4*
Maine	.6	.5	.6	.6	.7
New Hampshire	.4	.3	.3	.5	.5
Vermont	.2	.2	.2	.2	.3
Massachusetts	1.3	1.0	1.3	1.7	1.7
Rhode Island	.3	.2	.3	.4	.3
Connecticut	.7	.6	.7	.6	.9
Middle Atlantic Division	*12.1*	*10.3*	*13.3*	*13.2*	*12.6*
New York	5.4	4.8	5.8	6.4	5.3
New Jersey	1.7	1.4	2.1	2.0	1.5
Pennsylvania	4.9	4.1	5.4	4.9	5.8
North Central Region	**26.7**	**26.7**	**26.6**	**26.3**	**27.4**
East North Central Division	*18.9*	*19.2*	*18.7*	*18.5*	*19.1*
Ohio	5.5	5.2	5.6	5.3	6.0
Indiana	2.5	2.7	2.2	2.3	2.9
Illinois	4.4	4.3	4.6	4.6	3.8
Michigan	4.5	4.9	4.3	4.2	4.2
Wisconsin	2.1	2.0	2.0	2.2	2.2
West North Central Division	*7.8*	*7.5*	*7.9*	*7.8*	*8.4*
Minnesota	1.6	1.4	1.8	1.7	2.0
Iowa	1.4	1.2	1.4	1.4	1.6
Missouri	2.4	2.5	2.4	2.1	2.3
North Dakota	..3	.3	.3	.4	.3
South Dakota	.4	.5	.3	.5	.5
Nebraska	.8	.7	.8	1.0	1.0
Kansas	1.0	1.1	1.0	.7	.8
South Region	**38.5**	**41.6**	**36.7**	**35.9**	**36.6**
South Atlantic Division	*18.0*	*19.5*	*17.4*	*16.4*	*17.2*
Delaware	.2	.2	.2	.2	.2
Maryland	1.6	1.7	1.6	1.8	1.6
District of Columbia	.2	.2	.1	.2	.1
Virginia	2.4	2.7	2.1	2.1	2.5
West Virginia	1.1	1.1	.9	1.0	1.2
North Carolina	2.8	3.1	2.6	2.2	2.6
South Carolina	1.6	1.8	1.6	1.6	1.5
Georgia	2.9	3.2	3.0	2.5	2.2
Florida	5.2	5.5	5.2	4.8	5.2

TABLE 11. ENLISTED ACCESSIONS BY STATE AND SERVICE: 1988 (in percentages) (Continued)

Census Region/ Division/ State	Armed Forces	Army	Navy	Marine Corps	Air Force
East South Central Division	*7.0*	*7.3*	*7.4*	*5.6*	*6.3*
Kentucky	1.7	2.0	1.7	1.4	1.5
Tennessee	1.9	1.8	2.1	1.7	2.0
Alabama	2.0	2.2	2.2	1.6	1.7
Mississippi	1.3	1.4	1.3	.9	1.2
West South Central Division	*13.5*	*14.8*	*11.9*	*13.9*	*13.1*
Arkansas	1.4	1.6	1.3	1.0	1.5
Louisiana	2.4	2.7	2.3	2.5	2.1
Oklahoma	1.6	1.7	1.5	1.4	1.7
Texas	8.1	8.9	6.9	8.9	7.8
West Region	**19.3**	**18.5**	**20.0**	**20.6**	**19.0**
Mountain Division	*6.4*	*6.1*	*6.5*	*6.7*	*6.9*
Montana	.5	.5	.5	.4	.8
Idaho	.6	.6	.6	.7	.7
Wyoming	.3	.3	.3	.2	.3
Colorado	1.7	1.5	1.9	1.7	1.8
New Mexico	.8	.7	.9	.7	.9
Arizona	1.5	1.6	1.4	1.8	1.4
Utah	.5	.4	.5	.5	.6
Nevada	.4	.4	.4	.5	.5
Pacific Division	*12.9*	*12.4*	*13.5*	*13.9*	*12.0*
Washington	2.3	2.3	2.4	2.4	2.1
Oregon	1.5	1.5	1.5	1.6	1.4
California	8.6	8.1	9.1	9.4	8.0
Alaska	.2	.2	.1	.3	.2
Hawaii	.3	.3	.3	.2	.4
United States Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Data for civilians from U.S. Bureau of the Census, *Current Population Survey*, March 1988; data for enlisted personnel from Defense Manpower Center (DMDC).

Although there appears to be a link between regional demographic shifts and recruiting shifts, two caveats must be mentioned. First, it is apparent from Table 10 that a significant factor in explaining observed changes in regional recruiting over time is the changing pattern of economic conditions across regions. The recession of 1981–1982 was particularly severe in the Northeast and Midwest, which partly explains why accession shares in these regions attained historic highs during that period. Since that time, the

economy of the Northeast has recovered and grown faster than the national growth rate. Conversely, the West South Central division suffered a severe recession in the mid-1980s due to a drop in energy prices. This regional downturn was an important factor in the growth of that division, and the Southern region as a whole, as a source of enlistments. Thus, while demographic changes are important, their main effects appear to be registered in the long run. In the short-run, economic conditions are the main determinant of regional recruiting success. Moreover, even in the long run economic shifts, migration, and population patterns are interrelated, and separating cause and effect has proven to be a difficult analytical task for researchers (more on this below).

Another factor that bears on the relationship between regional population changes and recruitment is that the Recruiting Command tends to respond to changes in economic conditions across regions by shifting recruiting resources. Also, given the distribution of recruiters, recruiting mission is distributed to recruiters on the basis of what is considered a "fair share" of the market, which in turn is based partly on past recruiting success in the area. In the short run, when the geographic distribution of recruiters is fixed, mission tends to fall as recruiting conditions in an area worsen. But in the long run, recruiters tend to be reassigned to areas with stronger markets. When policy shifts such as these occur, the observed recruiting numbers reflect the policy changes as much as the changes in demographic conditions.

Table 12 displays the distribution of accessions and population for 1989. The first column displays the percentage of NPS accessions for each region/division/state, while the second column displays the percentage of the 18 to 24 year old population for each area. The "representation ratio" in the third column is obtained by simply dividing the accession and youth population percentages. Ratios above 1.0 indicate that an area's accession share exceeds its population share; ratios below 1.0 indicate the reverse.

Two observations emerge from Table 12. First, examining recruiting and demographic information for aggregated census regions and division may obscure the significant variation that occurs at the state level. For example, while the West region reveals an overall representation ratio of .95, nine of the 13 western states had ratios that exceeded 1.0. In fact, several western states had some of the highest representation ratios of any U.S. state. It is

TABLE 12. POPULATION REPRESENTATION RATIO FOR EACH REGION, DIVISION AND STATE: 1989

Census Region/ Division/ State	Area's Percentage of all NPS Accessions	Area's Percentage of all 18–24 Year Olds	Representation Ratio
Northeast Region	**14.15**	**20.80**	**0.68**
New England Division	*3.20*	*5.47*	*.59*
Maine	.54	.44	1.22
New Hampshire	.39	.41	.95
Vermont	.20	.17	1.17
Massachusetts	1.16	2.59	.45
Rhode Island	.21	.40	.54
Connecticut	68	1.45	.47
Middle Atlantic Division	*10.95*	*15.33*	*.71*
New York	5.06	7.75	.65
New Jersey	1.52	3.20	.47
Pennsylvania	4.37	4.38	1.00
North Central Region	**25.90**	**24.95**	**1.04**
East North Central Division	*18.28*	*17.58*	*1.04*
Ohio	5.21	4.65	1.12
Indiana	2.43	2.19	1.11
Illinois	4.18	5.02	.83
Michigan	4.53	3.94	1.15
Wisconsin	1.93	1.77	1.09
West North Central Division	*7.62*	*7.37*	*1.03*
Minessota	1.47	1.85	.79
Iowa	1.24	1.06	1.17
Missouri	2.43	2.22	1.09
North Dakota	.29	.25	1.13
South Dakota	.39	.28	1.38
Nebraska	.80	.60	1.32
Kansas	1.02	1.10	.92
South Region	**40.29**	**33.65**	**1.20**
South Atlantic Division	*18.77*	*16.43*	*1.14*
Delaware	.20	.30	.68
Maryland	1.66	1.90	.87
District of Columbia	.17	.26	.68
Virginia	2.52	2.33	1.08
West Virginia	1.00	.71	1.41
North Carolina	2.81	2.62	1.07
South Carolina	1.79	1.27	1.41
Georgia	3.06	2.55	1.20
Florida	5.54	4.49	1.23

TABLE 12. POPULATION REPRESENTATION RATIO FOR EACH REGION, DIVISION AND STATE: 1989 (Continued)

Census Region/ Division/ State	Area's Percentage of all NPS Accessions	Area's Percentage of all 18–24 Year Olds	Representation Ratio
East South Central Division	*7.46*	*6.44*	*1.16*
Kentucky	1.79	1.48	1.21
Tennessee	2.02	2.38	.85
Alabama	2.22	1.48	1.50
Mississippi	1.43	1.09	1.31
West South Central Division	*14.06*	*10.79*	*1.30*
Arkansas	1.39	1.01	1.38
Louisiana	2.52	1.80	1.40
Oklahoma	1.64	1.27	1.30
Texas	8.51	6.72	1.27
West Region	**19.67**	**20.60**	**.95**
Mountain Division	*6.54*	*5.13*	*1.27*
Montana	.54	.27	2.01
Idaho	.58	.34	1.67
Wyoming	.30	.18	1.73
Colorado	1.67	1.23	1.36
New Mexico	.92	.61	1.52
Arizona	1.56	1.30	1.20
Utah	.51	.73	.69
Nevada	.45	.46	.98
Pacific Division	*13.13*	*15.47*	*.85*
Washington	2.20	1.51	1.46
Oregon	1.47	.98	1.49
California	8.98	12.50	.72
Alaska	.18	.17	1.06
Hawaii	.29	.30	.97
United States Total	**100.00**	**100.00**	**100.00**

Source: Office of the Assistant Secretary of Defense, *Population Representation in the Military Services, 1989.*

mainly California, with a ratio of only .72, that pulled down the average ratio for the western region.

A second point is that economic conditions, once again, help explain the relative cross sectional (point in time) pattern of accessions. The states with the lowest (highest) representation ratios were also those with unemployment rates well below (above) the national average. The correlation coefficient

between the 1989 state unemployment rates and the representation ratios was .51, indicating that economic conditions are strongly associated with the ability and propensity of regional populations to supply manpower to the military services.[11]

[11]Office of the Assistant Secretary of Defense (FM&P), *Population Representation in the Military Services FY 1989* (Washington, DC: 1990).

VI. CAUSES OF THE REGIONAL EMPLOYMENT AND POPULATION SHIFTS

Frey and Speare characterize the 1970s as "a transition decade in the recent history of United States population redistribution" (1988, p. 6). They argue that before this time the nation's population was generally shifting to the West at the expense of the other regions. Larger metropolitan areas were growing more rapidly than smaller ones, nonmetropolitan-to-metropolitan migration favored all metropolitan areas, and suburbs grew at the expense of central cities. During the 1970s, however, these patterns began changing in fundamental ways that are not completely understood.

These authors go on to argue that although during the 1950s and 1960s migration tended to favor high-wage areas, during the 1970s it favored low-wage areas. Migration, they stress, "did not conform to the conventional economic 'micro-models' which assume that migrants move from areas with low wages to areas with higher wages" (1988, p. 439). Rather, they see "regional restructuring by deindustrialization" as the major source of the shifts. They do not, however, offer a theoretical perspective or even a persuasive argument for why such restructuring should have occurred.

The literature on changing patterns of regional growth suggests several forces that underlie the employment and population behavior of the 1970s and early 1980s. Broadly speaking, the patterns of regional change described above must stem from some mixture of supply of, and demand for, labor at alternative locations. For example, on the demand side, during the 1970s rising energy prices, combined with environmental restrictions on the consumption of certain fuels, stimulated new economic activity in many areas of the South and West (McCarthy and Morrison, 1977), while discouraging it in many areas of the Northeast and Midwest (Tolley and Graves, 1981). Due to a combination of increased incomes, changed preferences for amenities, and changed prices of amenities, recent years have also seen increased demands for environmental amenities. In many cases, the increased demand for location-specific amenities can be satisfied only by movement to the South or West (Graves, 1979). The federal government has probably also played some role in the shift of employment to the South and West (Coleman, 1978; Greenwood, Hunt, and Pfalzgraff, 1987). These forces have contributed to a shift of market potential, both among intermediate suppliers and producers of

final goods and services, which in cumulative fashion has attracted still more employers and workers.

Whereas the forces mentioned above and others have been important in the shifts of population and employment to the South and West, for purposes of the present argument, perhaps the most important is the changing relative cost of doing business in old industrial regions of the country. Diseconomies associated with dense urban locations, in combination with the declining relative importance of distance, have increasingly improved the competitive position of less densely populated areas. Moreover, lack of unionization, coupled with the continued location in these regions of both internal migrants and immigrants, as well as a sizeable untapped pool of potential indigenous workers, allowed considerable employment growth to occur without causing wages to converge rapidly to the national average.

Several analysts have attempted to evaluate quantitatively the contribution of various factors to changes in the location of economic activity from the North to the South. In an early study, Fuchs (1962) assigned a one-third contribution to each of three factors: the lower cost of labor, the "pull" of natural resources, and demand-side and unexplained forces. Later studies have attributed an even smaller role to the existence of low-cost nonunion labor in the South (Plaut and Pluta, 1983; Carlton, 1983). Rather, they stressed the importance of the "business climate" in attracting new businesses and better weather in attracting individuals.

There has been some controversy over whether the relocation of manufacturing firms has narrowed the historic North-South wage differential in manufacturing. The consensus appears to be that real wages in the South are no lower than in the North after differences in the human capital (education, skills, training) of the labor force are controlled. Yet, one of the more important consequences of the shifts of businesses to the Sun Belt has been a definite narrowing of regional differences in per capita income (Crandall, 1988). Why this difference?

A simple explanation is that the North-South wage differential is commonly measured solely for manufacturing, a sector that currently accounts for only about 20 percent of the labor force. A more important factor in explaining the narrowing of regional per capita income differences is the changing composition of the labor force in the North and South. Between 1960 and 1980, differences across regions in median years of school dropped sharply

(Crandall, 1988). In addition, the share of prime age workers (ages 25 to 44) in the labor force rose more rapidly in the South than in the North. These demographic trends in the labor force also provide some clues to future changes in population and economic activity in the Sun Belt and Rust Belt.

VII. PROSPECTS OF THE CONTINUATION OF THE SHIFT

Regional growth and decline are probably characterized most accurately within a general equilibrium framework. Even the most primitive predictions of future patterns of regional growth are best made within such a framework, which is necessarily complex and becomes more complex the further one wishes to look to the future. In the very long run, even small changes in the net spatial utility and/or production advantages of various locations can have profound implications that are not well anticipated at the present time. In the broad predictions that follow, the time frame is about 20 to 25 years, before the baby boom cohort begins aging into retirement, which could produce another massive population shift to the South and West that triggers another significant employment shift.

Although certain cumulative and self-reinforcing forces are operating to maintain the advantages of the South and West, the sharp regional differences observed during the 1970s and early 1980s are unlikely to be maintained in the future. Indeed, powerful demographic forces are operating to reduce interregional migration and the sizeable employment growth differentials observed in recent years.

Between 1970 and 1980 a convergence occurred in regional employment to population ratios (Table 13). Most noteworthy, over this period the South's ratio increased from 0.32 to 0.39 and in 1980 was almost equal to the national average (0.40). What if the South's employment to population ratio had remained at 0.32 in 1980? A population of 91.1 million would have been required to accommodate employment of 29.1 million jobs, or about 15.7 million more people would have been required than were actually residing in the South in 1980. Thus, over four times the observed internal migration would have been required during the 1970–1980 period to accommodate the South's employment growth during the same period, and over twice the total migration would have been required. Consequently, the ability of the indigenous population to respond to employment growth served as a buffer that necessitated less migration than would otherwise have been required.

Because the South's employment to population ratio is now close to the national average, the potential for the South's population to provide a differential labor supply response to employment growth seems largely exhausted,

TABLE 13. RATIOS OF NONAGRICULTURAL EMPLOYMENT TO POPULATION, BY CENSUS DIVISION, 1950–1980

Region/Division	1950	1960	1970	1980
Northeast	**0.36**	**0.35**	**0.38**	**0.42**
New England	0.36	0.35	0.38	0.44
Middle Atlantic	0.36	0.35	0.38	0.41
Midwest	**0.31**	**0.31**	**0.35**	**0.40**
East North Central	0.34	0.32	0.36	0.40
West North Central	0.26	0.27	0.33	0.40
South	**0.24**	**0.26**	**0.32**	**0.39**
South Atlantic	0.26	0.28	0.35	0.40
East South Atlantic	0.20	0.23	0.30	0.35
West South Atlantic	0.23	0.25	0.31	0.39
West	**0.28**	**0.30**	**0.34**	**0.41**
Mountain	0.25	0.27	0.32	0.40
Pacific	0.29	0.30	0.34	0.41
United States	**0.30**	**0.30**	**0.35**	**0.40**

Source: Calculated from employment data referenced in Table 2 and population data from U.S. Bureau of the Census, *Statistical Abstract of the United States: 1986* (106th edition). Washington, DC, 1985, Table 11.

which suggests that in the future the South's population growth will more closely mirror its employment growth. Since the baby boom has largely matured out of the most mobile age classes nationwide, the national pool of potential migrants has also shrunk, which suggests further that employment-growth differentials strongly favoring the South (and the West) will not persist in the future.

The above observations suggest that initially the South's labor supply was more elastic, which may have allowed labor demand to grow for a time without placing strong upward pressure on wage rates. This lack of strong wage pressure allowed wages in the South to remain relatively low, which allowed the South to maintain its position as a relatively low-wage region. However, now that the South's employment-to-population ratio has converged almost to the national average, continued differential growth of labor demand will probably drive up wages and somewhat reduce the competitive advantage of relatively low wages that has in the past characterized much of the South.

Not only does job growth attract migrants, but also migrants encourage growth of employment. Greenwood and Hunt (1984) show that for an average U.S. metropolitan area, 100 new jobs will be filled by between 40 and 50 (net) migrants. Moreover, Muth (1971), followed by Greenwood and Hunt (1984), shows that another employed migrant results in approximately one more job. With a population-employment ratio of 2.5 to 1 and with about 5.2 million net internal migrants to the South and West between 1970 and 1980, approximately 2.1 million jobs were shifted from the Northeast and Midwest to the South and West through internal migration.

The educational selectivity of migration also clearly favored the South and the West during the 1970s.[12] Only these two regions had a favorable balance of migration of persons with four or more years of college. Between 1975 and 1980, for example, the South gained 137 persons with four or more years of education for every 100 such persons it lost (Table 14). The West attracted 179 such in-migrants for every 100 such out-migrants. On the other hand, the Northeast gained 53 of these persons for every 100 lost, and the Midwest gained 67 per 100 lost. These highly educated migrants ought to have contributed to the differentially rapid employment growth that was observed in the South and West.

The maturing of the baby boom out of the most mobile age classes should also have depressed the stock of well-educated young people from which southern and western in-migrants were drawn during the 1970s and 1980s. If they are to maintain their ability to capture roughly the same number of young, well-educated migrants, the South and West must attract a relatively higher share of the shrinking national pool of such persons. Thus, presumably the relative wages available to them in the South and West must be sufficiently higher compared to those available to the baby boom, or some other factor or factors must operate to increase their propensity to move to the South and West.

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[12]Pursell (1977) shows that for the 1965–70 period southern net in-migration "was skewed toward the younger male, under 35, better educated, with more than 12 years of education." He goes on to conclude that "the southern states appear to have shifted dramatically from a net exporter to a net importer of human capital."

TABLE 14. INTERREGIONAL MIGRATION OF PERSONS 25 AND OVER WITH FOUR OR MORE YEARS OF COLLEGE, 1975–1980 AND 1980–1985 (in thousands)

From \ To	Northeast	Midwest	South	West	Total Out	Number of In-migrants per 100 Out-migrants
			1975–1980			
Northeast	—	99	264	149	512	53
Midwest	92	—	209	241	542	67
South	134	158	—	167	459	137
West	47	107	157	—	311	179
Total In	273	364	630	557	—	—
			1980–1985			
Northeast	—	110	292	153	555	66
Midwest	122	—	350	228	700	53
South	181	156	—	204	541	160
West	66	105	222	—	393	149
Total In	369	371	864	585	—	—

Sources: U.S. Bureau of the Census, Current Population Reports, Series P-20, No. 368, "Geographical Mobility: March 1975 to March 1980" (Washington, DC: U.S. Government Printing Office 1981), Tables 41 and 42, "Geographical Mobility: 1985," (Washington, DC: U.S. Government Printing Office, 1987), Table 20.

The maturing of the baby boom out of the most mobile age classes will likely cause the population and employment shifts to the South and West to slow relative to the recent past. In the early 1990s, the youngest members of the baby boom cohort will almost all be in their thirties. The main bulge of baby boomers will be 35 to 44 years of age, as can be seen by adding 10 years to the "age" column of Table 7. Thus, the interstate migration rates of this older group will only be about half of what they were when its members were in their late twenties.

While we will have to wait a few years to see if, in fact, regional population counts or estimates reflect these predictions, preliminary analysis of the 1990 Census shows that population growth in the South and West did slow in the late 1980s (Lewis, 1991). By contrast, in the Northeast and Midwest, 18 metropolitan areas that had been losing population gained population in the late 1980s. The slowdown in the South and West was concentrated in the interior areas, especially those areas in which oil and mining industries are located.

As pointed out above, from their peak at about 25 years of age, migration propensities decline steadily with age, at least until retirement age is reached

at approximately 65. If the baby boom cohort were somehow different such that migration propensities increased at later ages, or did not fall as rapidly, more migration could potentially occur than would otherwise have been the case as the baby boom ages. Data indicate that the age profile of migration propensities is qualitatively the same for the baby boom as for the population in general. Although available data do not suit themselves ideally to addressing this issue, they seem to indicate that the baby boom has lower rather than higher interstate migration propensities than its immediate predecessor cohort.

Data reported above, however, may suggest the beginning of a new era in regional population and employment change. As the youngest of the baby boom matured through the most mobile age classes (roughly, in the mid-twenties), the volume of inter-regional migration increased only slightly during the 1980- 85 period (10.2 million) relative to the 1975–80 period (10.1 million) (Table 4). In the absence of unforeseen circumstances, this volume will probably decline between 1985 and 1990, and especially after 1990. Migration from abroad will consequently play a relatively more important role in the South and West than was previously the case.

As the population projections reported below in Section VIII will show, in future years the population in the most highly mobile age groups will decline substantially, and the South and West will not have the sizeable pool of potential migrants to draw upon nationally that they have had during the recent past.[13] Of course, when the baby boom begins to age into retirement during the decade between 2010 and 2020, a great surge of retirement migration could occur to the South and West, and this migration could trigger substantial nonretirement migration and further employment growth.

Moreover, a slowdown may occur in the migration of the most highly educated to the South and West not only because the pool of potentially mobile, well-educated persons in their twenties and early thirties will shrink nationally, but also because their interstate migration propensities appear to be declining. Note that of the migration propensities reported in Table 5, most of those for individuals with 4 years or with 5 or more years of education are either down for the 1980 to 1985 period or up only slightly.

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[13]According to Census projections, the population aged 20 to 39 will not again increase absolutely until the period 2005-2010.

All of this is not to say that the South and West will not continue to experience more population and employment growth than the Northeast and Midwest. The nature of U.S. immigration policy is such as to suggest that heavy immigration will continue from Asian countries, Mexico, and the Caribbean. These immigrants will continue to locate in relatively large numbers in coastal and border states of the South and West, like Florida, Texas, and California. Differential rates of natural increase will probably also continue to favor southern and western areas, but because of the maturing of the baby boom out of the ages with the highest fertility rates, perhaps not as much as in the recent past.

Simultaneity between population and employment growth is well-established in the migration literature. (Greenwood, 1975). Thus, employment growth differentials that have strongly favored the South and West will also relax somewhat in future years. During the first half of the 1980s, national employment grew modestly compared to the prior 15 years. Whereas average annual growth of nonagricultural employment was 2.0 million jobs between 1965 and 1980, it was 1.4 million between 1980 and 1985. These differences are due to many factors, not the least of which is that the baby boom was aging into the labor force during the 1965–1980 period.

This slowdown in national employment growth translates to slower regional employment growth. During the first half of the 1980s, the annualized rate of growth of nonagricultural employment was only 54 percent as high in the South as during the 1975–80 period and only 73 percent of that during the 1970–75 period. The employment growth slowdown in the West was even more dramatic. The employment growth rate for 1980–85 was 43 percent of that for 1975–80 and 65 percent that of 1970–75. Although between 1980 and 1985 nonagricultural employment hardly grew in the Midwest, in the Northeast it did quite well relative to the 1970s. Between 1970 and 1980 nonagricultural employment grew by 1.8 million in the Northeast, whereas between 1980 and 1985 it grew by 1.5 million. These changed employment growth patterns may be due in part to factors like recessions, foreign trade competition, and oil price declines. In part they also mutually interact with population change and will undoubtedly continue to do so in the future, perhaps mirroring these changes even more closely than in the past.

VIII. POPULATION AND MIGRATION PROJECTIONS

The Census Bureau provides four alternative series of projections of the population of the 50 states and the District of Columbia for 1989 through 2010. Each series is based on a different assumption about future trends in the components of change, including internal migration. While trends in all components of population change are subject to variation, and future trends are not easily predicted, internal migration is the most problematic in state-level projections.[14] The range of population projections for individual states varies widely across the four series and depends largely on internal migration. In addition, given the sensitivity of internal migration to changes in economic conditions, international migration, mortality, and fertility, changes in internal migration can be both rapid and sizeable. The four assumptions concerning internal migration that underlie each series are discussed below.

Series A establishes a trend by estimating a linear regression model of state-to-state migration using data for the period 1975–1988. When the regression model produces extreme values, these values are restricted to be within a certain range of the mean of the historical data. This provides a composite method that attempts to meet four objectives:

a. To use a long time period so that random or abnormal fluctuations are averaged out;

b. To use the most recent data available to reflect recent shifts in a state's migration patterns;

c. To continue recent changes in migration rates so that emerging trends are captured; and

d. To force convergence in the migration rates so that a return to some equilibrium value is assured.

Series B uses the simple mean of the state-to-state migration rates observed for the period 1975 to 1988. It is a straightforward approach based on the average conditions over the entire period. Thus, the state-to-state migration rate equals the arithmetic mean of its historical pattern.

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[14]U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1053, "Projections of the Population of States by Age, Sex, and Race: 1989 to 2010." (Washington, DC: U.S. Government Printing Office, 1990).

Series C uses the mean of the historical state-to-state migration rates for a more recent period: 1985 through 1988. The mean of the more recent time period is used in an attempt to smooth abnormal fluctuations. It assumes that each state-to-state rate equals the arithmetic mean of the rate for each of the years during the chosen internal, 1985–1988.

Series D adopts the extreme assumption of zero net internal migration. This series shows what would occur to a state's population solely on the basis of changes in fertility, mortality, and international migration alone. It provides a benchmark against which to measure the effects of any other projection that does include internal migration.

Table 15 shows the projections of the total resident population by region from 1990 to 2010 for each of the four series, while Table 16 displays the corresponding shares of the population for each region. Table 17 shows the projected population growth rates for regions and divisions. Table 18 ranks each state according to its projected growth rates over the next two decades. Table 19 provides projections of the components of population change for regions and divisions.

The differences in the projections generated by each series are revealed perhaps most strikingly in Table 17. For example, all four series forecast positive population growth rates over the decade of the 1990s for the Midwest. However, the projected growth rate varies from a low of 0.4 percent using Series A to a fairly robust 5.8 percent using Series D. The explanation, of course, is the assumption of no net migration imbedded in Series D. This assumption overstates potential population growth in regions most likely to experience net out-migration, such as the Northeast and Midwest, and understates growth in regions most likely to experience net in-migration, such as the South and West. While migration is likely to slow in the next decades, it is not likely to slow sufficiently to make Series D a realistic growth scenario. If one ignores Series D, a narrower and more plausible range of projected growth rates for each region is obtained.

Taken together, Tables 15 through 19 provide evidence that some of the patterns that have predominated during the 1980s are likely to continue in the 1990s and beyond. In the decade of the nineties almost 94 percent of the net increase in the U.S. population will be concentrated in the South and West; in the first decade of the 21st century, this percentage will be even

TABLE 15. PROJECTIONS OF TOTAL POPULATION OF REGIONS, BY SERIES, 1989 TO 2010 (thousands)

Region	1989	1990	1991	1992	1993	1994	1995	2000	2005	2010
					SERIES A					
NE	50,695	50,850	51,011	51,175	51,341	51,504	51,665	52,419	53,124	53,801
MW	60,089	60,288	60,443	60,556	60,636	60,687	60,712	60,528	60,110	56,696
S	85,545	86,517	87,485	88,445	89,389	90,317	91,227	95,575	99,678	103,529
W	51,404	52,237	53,045	53,826	54,582	55,311	56,015	59,226	62,174	65,030
					SERIES B					
NE	50,631	50,707	50,777	50,841	50,896	50,941	50,976	51,005	50,897	50,763
MW	60,025	60,205	60,374	60,528	60,669	60,798	60,914	61,342	61,668	61,997
S	85,624	86,644	87,636	88,600	89,534	90,440	91,317	95,382	99,101	102,577
W	51,453	52,336	53,197	54,034	54,848	55,641	56,412	60,019	63,421	66,719
					SERIES C					
NE	50,684	50,814	50,938	51,056	51,166	51,266	51,357	51,662	51,825	51,961
MW	60,072	60,296	60,510	60,706	60,889	61,058	61,213	61,815	62,289	62,744
S	85,547	86,489	87,404	88,291	89,149	89,979	90,781	94,483	97,857	101,008
W	51,431	52,292	53,132	53,949	54,744	55,517	56,269	59,788	63,114	66,344
					SERIES D					
NE	59,868	51,179	51,481	51,767	52,043	52,304	52,553	53,583	54,371	55,028
MW	50,286	60,723	61,148	61,552	61,940	62,312	62,665	64,231	65,584	66,824
S	85,304	85,998	86,673	87,325	87,950	88,553	89,132	91,750	94,113	96,318
W	51,277	51,990	52,684	53,357	54,013	54,649	55,271	58,186	61,018	63,886

Source: U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1053, "Projections of the Population of States by Age, Sex, and Race: 1989 to 2010," (Washington, DC: U.S. Government Printing Office, 1990).

TABLE 16. PROJECTIONS OF THE PERCENTAGE OF TOTAL POPULATION OF REGIONS, BY SERIES, 1989 TO 2010 (thousands)

Region	1989	1990	1991	1992	1993	1994	1995	2000	2005	2010
					SERIES A					
NE	20.46	20.35	20.24	20.15	20.06	19.98	19.90	19.58	19.31	19.07
MW	24.26	24.13	23.99	23.84	23.69	23.54	23.38	22.61	21.85	21.16
S	34.53	34.62	34.72	34.82	34.92	35.03	35.14	35.69	36.24	36.71
W	20.75	20.90	21.05	21.19	21.33	21.45	21.58	22.12	22.60	23.06
					SERIES B					
NE	20.44	20.29	20.15	20.01	19.89	19.76	19.64	19.05	18.50	18.00
MW	24.23	24.09	23.96	23.83	23.70	23.58	23.46	22.91	22.42	21.98
S	34.56	34.68	34.78	34.88	34.98	35.08	35.17	35.62	36.03	35.37
W	20.77	20.94	21.11	21.28	21.43	21.58	21.73	22.42	23.05	23.65
					SERIES C					
NE	20.46	20.33	20.21	20.10	19.99	19.88	19.78	19.30	18.84	18.42
MW	24.25	24.13	24.01	23.90	23.79	23.68	23.58	23.09	22.64	22.25
S	34.53	34.61	34.69	34.76	34.83	34.90	34.97	35.29	35.57	35.81
W	20.76	20.93	21.09	21.24	21.39	21.54	21.67	22.32	22.95	23.52
					SERIES D					
NE	20.53	20.48	20.43	20.38	20.33	20.29	20.24	20.01	19.77	19.51
NW	24.34	24.30	24.27	24.23	24.20	24.17	24.14	23.99	23.84	23.69
S	34.43	34.41	34.40	34.38	34.36	34.35	34.33	34.27	34.21	34.15
W	20.70	20.81	20.90	21.01	21.11	21.19	21.29	21.73	22.18	22.65

Source: U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1053, "Projections of the Population of States by Age, Sex, and Race: 1989 to 2010," (Washington, DC: U.S. Government Printing Office, 1990).

TABLE 17. PROJECTIONS OF POPULATION GROWTH RATES FOR REGIONS AND DIVISIONS, BY SERIES: 1990 TO 2000 AND 2000 TO 2010

Region/Division	1990 to 2000				2000 to 2010			
	Series A	Series B	Series C	Series D	Series A	Series B	Series C	Series D
Northeast	3.1	0.6	1.7	4.7	2.6	-0.5	0.6	2.7
New England	6.6	3.2	5.1	4.1	5.6	1.4	3.1	1.8
Mid Atlantic	1.9	-0.3	0.5	4.9	1.6	-1.1	-0.3	3.0
Midwest	0.4	1.9	2.5	5.8	-1.4	1.1	1.5	4.0
East North Central	0.4	1.2	2.6	5.8	-1.4	0.3	1.5	3.9
West North Central	0.4	3.6	2.4	5.8	-1.4	2.8	1.6	4.4
South	10.5	10.1	9.2	6.7	8.3	7.5	6.9	5.0
East South Central	18.2	10.0	13.8	4.7	15.2	7.2	9.8	2.7
West South Central	4.3	6.6	6.8	5.6	2.3	5.1	5.2	3.9
West	13.4	14.7	14.3	11.9	9.8	11.2	11.0	9.8
Mountain	11.2	15.3	11.8	10.4	7.7	11.0	8.6	9.0
Pacific	14.1	14.5	15.2	12.5	10.5	11.2	11.8	10.1
United States	7.1	7.1	7.1	7.1	5.3	5.3	5.3	5.3

Source: U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1053, "Projections of the Population of States by Age, Sex, and Race: 1989 to 2010," (Washington, DC: U.S. Government Printing Office, 1990).

TABLE 18. STATES RANKED BY POPULATION CHANGE (in percent): 1990–2000 AND 2000–2010

1990–2000		2000–2010	
State	% Change	State	% Change
Arizona	12.1	Hawaii	15.9
Nevada	21.1	Arizona	15.2
New Mexico	20.6	New Mexico	14.2
Florida	20.3	Nevada	13.9
Georgia	19.4	Florida	13.7
Alaska	19.3	Georgia	13.7
Hawaii	17.9	California	11.5
New Hampshire	16.7	Alaska	11.4
California	15.0	Texas	10.2
Texas	14.1	New Hampshire	9.2
Utah	12.1	Utah	9.0
North Carolina	11.9	North Carolina	9.0
Virginia	11.7	Maryland	7.8
Maryland	11.5	Virginia	7.8
Colorado	11.0	South Carolina	7.7
Delaware	10.2	Delaware	7.6
South Carolina	10.1	Colorado	7.5
New Jersey	8.2	Washington	5.8
Washington	7.2	Mississippi	5.2
Mississippi	6.6	New Jersey	5.1
Tennessee	5.9	Alabama	4.5
Alabama	5.5	Tennessee	4.4
Vermont	5.2	Oklahoma	4.0
Connecticut	5.1	Oregon	4.0
Maine	4.9	Arkansas	3.8
Rhode Island	4.7	Rhode Island	3.4
Arkansas	4.2	Idaho	3.1
Oregon	4.0	Maine	2.9
Minnesota	3.8	Vermont	2.9
Missouri	3.7	Massachusetts	2.8
Massachusetts	3.5	Missouri	2.6
Idaho	2.9	Connecticut	2.5
Oklahoma	2.8	Minnesota	2.0
Kansas	1.5	Kansas	1.4
New York	1.2	South Dakota	1.1
South Dakota	0.8	New York	0.9
Louisiana	0.1	Louisiana	0.6
Kentucky	-0.3	Montana	0.0
Illinois	-0.3	Wyoming	-0.4
Michigan	-0.5	Kentucky	-0.6
Wisconsin	-0.5	Illinois	-0.7
Indiana	-0.9	Wisconsin	-1.5
Montana	-1.4	Michigan	-1.7
Ohio	-1.5	Indiana	-1.7
Nebraska	-2.0	Nebraska	-1.7
Wyoming	-2.6	Ohio	-2.2
Pennsyivania	-2.7	North Dakota	-2.9
North Dakota	-4.7	Pennsylvania	-3.2
West Virginia	-7.2	West Virginia	-6.1
Iowa	-7.6	Iowa	-6.6
Total U.S.	7.1	Total U.S.	5.3

Source: U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1017, "Projections of the Population of States by Age, Sex, and Race: 1988 to 2010," (Washington, DC: Government Printing Office, 1989), Table F.

TABLE 19. PROJECTIONS OF THE COMPONENTS OF POPULATION CHANGE, FOR REGIONS AND DIVISIONS: 1990 TO 2000 AND 2000 TO 2010 (thousands)

Region/Division	1990 to 2000			2000 to 2010		
	Natural Increase	Net Migration		Natural Increase	Net Migration	
		Internal	International		Internal	International
United States	13,838	—	5,279	10,570	—	4,998
Northeast	1,510	-1,037	1,234	908	-566	1,212
New England	441	239	218	295	320	206
Mid Atlantic	1,070	-1,276	1,016	612	-886	1,005
Midwest	3,033	-3,208	597	2,064	-3,312	583
E.N. Central	2,146	-2,315	463	1,461	-2,375	452
W.N. Central	887	-893	133	604	-936	131
South	4,604	3,492	1,220	3,343	3,763	1,118
South Atlantic	1,829	5,738	587	1,393	6,162	517
E.S. Central	769	-124	65	488	-151	63
W.S. Central	2,006	-2,120	567	1,462	-2,245	538
West	4,689	729	2,229	4,256	91	2,085
Mountain	1,268	183	172	1,112	0	153
Pacific	3,420	546	2,057	3,143	91	1,932

Source: U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1053, "Projections of the Population of States by Age, Sex, and Race: 1989 to 2010," (Washington, DC: U.S. Government Printing Office, 1990).

higher. The West will continue to be the fastest growing region due to its higher fertility rates and significant net in-migration. In addition, the West is projected to attract a disproportionate share of immigrants, nearly twice as many immigrants as any other single region. The South will benefit from substantial in-migration, with over one-half of its total growth due to migration. The population of the Midwest is projected to decline, while the Northeast will register small population increases. These basic patterns are expected to persist into the next century.

Of the ten fastest growing states in the next two decades, all but one will be located in the South or West. These nine states will grow twice as fast as the Nation as a whole. Arizona will be the fastest growing state in the nineties, and the second fastest growing between 2000 and 2010. On the

other end of the spectrum, 13 states will lose population, with Iowa and West Virginia registering the greatest declines. While the states losing population are located in several different Census divisions, they are all located in the northern half of the country.

The age distribution of the population is of particular concern to military manpower planners. Table 20 shows the projected population of 18 to 24 year old males by region. During the first half of the decade, all regions are expected to experience decreases in this age group. The effects of the "birth dearth" will end in the second half of the 1990s and small increases will occur in all regions. However, these changes during the 1990s will not be of the same magnitude in all regions. Between 1990 and 1995 the Northeast and Midwest will experience decreases of over 20 percent in the size of the youth age group, whereas the South and West will see much smaller declines. While only negligible increases will occur in the Northeast and Midwest between 1995 and 2000, the South and West will see a four and nine percent increase, respectively, in their male youth populations. Between 2000 and 2005 all regions will experience gains in the youth population, but between 2005 and 2010 this trend will reverse and all regions will experience a slow growth rate in this age group.

TABLE 20. PROJECTED POPULATION OF 18 TO 24 YEAR OLD MALES (thousands)

	1995		2000		2005		2010	
Region	Number	Growth (%)[a]	Number	Growth (%)	Number	Growth (%)	Number	Growth (%)
Northeast	2,157	-.24	2,163	.002	2,321	.07	2,346	.01
Midwest	2,711	-.20	2,746	.01	2,821	.03	2,818	.001
South	4,485	-.08	4,675	.04	5,005	.07	5,076	.01
West	5,305	-.03	5,806	.09	6,391	.10	6,452	.01

Notes: [a]Growth rate in 1995 computed using 1986 as basis

Source: U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1053, "Projections of the Population of States by Age, Sex, and Race: 1989 to 2010," (Washington, DC: U.S. Government Printing Office, 1990).

IX. FORECASTS OF REGIONAL ECONOMIC CONDITIONS

While demographic changes are important, their effects on regional recruiting are likely to be decidedly secondary in importance to economic changes. Demographic trends are well understood and forecasts are fairly reliable, but their effects are registered mostly in the long-term. In the medium- to short-term, economic fluctuations dominate recruiting patterns. Long-term trends in economic forces are also important: They provide some clues to the nature of structural changes in a local economy based on its industry mix. Long-run economic fluctuations have the greatest effect on Reserve recruiting, and knowledge of these trends provide information on an area's desirability for locating new Reserve units or relocating existing units.

Projections of a number of economic data series are available for regions from the Bureau of Economic Analysis (BEA) of the Department of Commerce[15]. The BEA methodology relies on two separate approaches to provide consistency in the projections. First, long-term projections are developed of population, labor force, employment, GNP, and GNP per employee at the national level. Then, state-level 1995 projections for personal income by component and employment and earnings by industry are made using an econometric model. The projections from the econometric model for each state are summed to obtain national totals, which are used to check the "top-down" national projections for that year. State long-term projections are also made using the "export base" approach, which relies on the relationship between "basic" or export industries and "service" or local industries. State projections beyond 2010 are available, but they are based on much simpler assumptions and projection techniques.

Tables 21, 22, and 23 report some of the aggregate projections of economic growth that are available from the BEA. Table 21 reports historical data on the average annual growth rate of real (constant dollar) personal

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[15]BEA also prepares projections to the year 2040 of population, personal income, earnings by sector, and employment by sector for 336 metropolitan areas. Projections of the same variables are made for 183 BEA "economic areas." Each economic area consists of a metropolitan statistical area (MSA) and the surrounding non-metropolitan counties that are economically related to the central MSA. Commuting patterns are the key factor in constructing economic areas (U.S. Department of Commerce, 1990).

TABLE 21. AVERAGE ANNUAL PERCENT CHANGE IN PERSONAL INCOME BY BEA REGION[a]: HISTORICAL 1973–1988 AND 1988–2010 PROJECTIONS (constant 1982 dollars)

BEA Region	1973–1979	1979–1983	1983–1988	1988–1995	1995–2000	2000–2005	2005–2010
New England	1.74	2.44	5.85	1.78	1.60	1.32	1.14
Midwest	0.01	1.39	4.20	1.77	1.54	1.26	1.12
Great Lakes	2.02	-1.27	3.18	1.84	1.60	1.30	1.16
Plains	1.91	-0.01	2.79	2.12	1.72	1.38	1.22
Southeast	3.94	2.17	4.57	2.42	2.06	1.64	1.42
Southwest	6.19	3.56	2.09	2.41	2.06	1.62	1.36
Rocky Mountains	5.07	2.26	1.58	2.52	2.24	1.78	1.48
Far West	4.90	1.66	4.88	2.77	2.26	1.80	1.50
United States	2.90	1.24	3.90	2.19	1.87	1.51	1.31

Notes: [a]BEA Regions consist of the following states:

New England:	CT, ME, MA, NH, RI, VT
Mideast:	DE, DC, MD, NJ, NY, PA
Great Lakes:	IL, IN, MI, OH, WI
Plains:	IA, KS, MN, MO, NE, ND, SD
Southeast:	AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, WA, WV
Southwest:	AZ, NM, OK, TX
Rocky Mountain:	CO, ID, MT, UT, WY
Far West:	CA, NV, OR, WA

Source: U.S. Department of Commerce, Bureau of Economic Analysis, "Regional Projections to 2040, Vol. 1: States," (Washington, DC: U.S. Government Printing Office, 1990).

TABLE 22. AVERAGE ANNUAL PERCENT CHANGE IN EMPLOYMENT BY BEA REGION: HISTORICAL 1973–1988 AND 1988–2010 PROJECTIONS

BEA Region	1973–1979	1979–1983	1983–1988	1988–1995	1995–2000	2000–2005	2005–2010
New England	2.06	1.13	3.88	1.06	0.91	0.54	0.25
Midwest	0.79	0.34	2.88	0.96	0.80	0.44	0.17
Great Lakes	1.64	-1.55	3.04	1.03	0.86	0.50	0.23
Plains	2.56	-0.25	2.45	1.03	0.84	0.47	0.21
Southeast	2.63	1.06	3.82	1.28	1.07	0.65	0.35
Southwest	4.71	2.77	1.95	1.31	1.11	0.66	0.34
Rocky Mountains	4.90	1.64	1.93	1.43	1.26	0.79	0.44
Far West	4.73	1.21	4.23	1.81	1.43	0.92	0.53
United States	2.54	0.56	3.21	1.24	1.03	0.62	0.32

Source: U.S. Department of Commerce, Bureau of Economic Analysis, "Regional Projections to 2040, Vol. 1: States," (Washington, DC: U.S. Government Printing Office, 1990).

TABLE 23. PER CAPITA PERSONAL INCOME BY BEA REGIONS: 1988–2010 (constant 1982 dollars)

BEA Regions	1988[a]	1995	2000	2005	2010
New England	$16,205	$17,319	$18,154	$18,825	$19,405
Midwest	15,239	16,545	17,477	18,237	18,897
Great Lakes	13,042	14,245	15,098	15,798	16,413
Plains	12,362	13,670	14,562	15,297	15,931
Southeast	11,614	12,832	13,691	14,399	15,014
Southwest	11,527	12,748	13,633	14,374	15,023
Rocky Mountains	11,531	12,717	13,577	14,296	14,929
Far West	14,575	15,752	16,622	17,339	17,967
United States	13,245	14,469	15,345	16,065	16,693

Notes: [a]1988 represents actual data.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, "Regional Projections to 2040, Vol. 1: States," (Washington, DC: U.S. Government Printing Office, 1990).

income and the projected annual growth rate for various periods by BEA region. Note that there are eight BEA regions, which are defined differently from Census regions; States contained in each BEA region are listed in the note to Table 21. Table 22 reports historical data on the average annual growth rate of total employment and projected rates by BEA region. Table 23 provides forecast values of real per capita personal income by BEA region.[16]

The historical data in Tables 21 and 22 highlight some of the economic changes that have occurred in the U.S. in the last decade or so. Personal income and employment growth were both fairly robust in the 1970s, growing at roughly 2.5–3.0 percent annually. This growth was curtailed in the early 1980s with the national recession: Nationwide employment growth came to a stop during the 1979–1983 period, while increases in personal income slowed to a rate of only one percent per year. States in the Great Lakes and Plains regions were especially hard hit in the early 1980s downturn, with decreases in both employment and personal income. Employment growth in the Mideast during this period was also stagnant. The 1983–1988 period witnessed the recovery of employment growth in all regions, although it was particularly rapid in New England, the Southeast, and the Far West.

The projections reveal that, nationwide, employment and personal income growth in the first half of the 1990s will not be as rapid as during the latter part of the 1980s. The growth rate of employment will be only about one-third of what it was during the late 1980s. Personal income growth will also slow, but not as sharply. After 1995, using these indicators, economic growth will continue to decelerate through the first decade of the 21st century. Essentially the models predict very slow employment growth and moderate personal income growth from 1995 to 2010.

While all states will share in the national slowdown in employment growth, some states will outperform the others. In general, the BEA regions located in the southern and western portions of the nation will grow faster than those in the other regions. While New England and the Mideast will experience zero employment growth during the next two decades, moderate

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[16]Projections of national labor force, economic growth, and employment growthalso are produced by the BEA methodology. In addition, national projections are produced by the Bureau of Labor Statistics (1989). The regional projections presented here are consistent with the national projections from the BLS.

growth will be registered in the other BEA regions through the year 2000. After 2000, however, all regions will experience slow growth of employment and personal income, providing fairly pessimistic scenarios for the first decade of the 21st century.

Table 23 provides actual data on real per capita income for 1988 and projected values for 1995 through 2010 by BEA region. This indicator takes into account population growth and is conventionally viewed as a gauge of overall economic well-being. Changes in this variable for the nation reflect those in the previous two tables: Moderate growth throughout the 1990s, with annual growth rates around one percent, then slow growth in the first decade of the 21st century, with annual growth rates below one percent. Thus, while real economic growth will expand, it will do so at a decreasing pace.

The potential impact of these projections on Army recruiting is not clearcut. The worst recruitment period in the history of the AVF was the late 1970s when employment growth was rapid. On the other hand, one of the best recruitment periods was the mid- to late-1980s, which also was a period of rapid economic expansion and employment growth. Yet the turnaround in recruitment from the bleak period of the late 1970s to the successes of the mid- to late-1980s occurred during the recession of the early 1980s when employment growth was slow nationwide and negative in some regions. Of course, this period coincided with major military pay increases in 1981 and 1982, but economic conditions clearly played a role. As evidence of the importance of economic conditions, even though recruiting during the late 1980s was robust in most regions, chronic shortfalls bedeviled New England where the expansion of employment exceeded the national average.

The projections for employment and economic growth will slow throughout the 1990s, and by 2000 conditions will begin to resemble those of the recessionary period of the early eighties. The limited historical evidence suggests that, as a result of these forecasted changes, recruitment conditions will improve steadily throughout the 1990s and into the first decade of the 21st century. Economic and employment growth consistently will fall below the national average in the BEA regions of New England, the Mideast, the Great Lakes, and the Plains; growth will exceed the national average in BEA regions located in the south and west.

X. IMMIGRATION

Historically, the years of heaviest U.S. immigration were early in this century, when the annual gross flows exceeded one million during 6 different years and peaked at 1.3 million in 1907. Between 1901 and 1910, 8.8 million immigrants were admitted to the U.S. (Table 24), which is a figure unrivaled in the nation's history. During the 1970s immigration surged to levels unseen since the early years of the century, as 4.5 million persons were admitted between 1971 and 1980. The only previous periods with higher totals were 1901–10, 1911–20 (5.7 million), and 1881–90 (5.2 million) (Table 24). Relative to the 1970s, immigration grew even stronger during the 1980s. The 1,090,924 persons admitted during 1989 was the highest total since 1924 and the fifth highest total in the nation's history.[17] Between 1981 and 1989 5.8 million legal immigrants were admitted for permanent residence in the U.S. If one adds the estimated 2.4 million undocumented aliens who entered during the 1980s, the decade of the eighties rivals the previous peak decade for total immigration volume.

The 1980 census recorded 5.6 million residents who immigrated to the U.S. between 1970 and 1980.[18] During this decade the foreign-born population grew by 5.4 million, which was the largest intercensal increase in U.S. history, representing 23.2 percent of the increment in population (Table 25). If illegal immigration during the 1970s contributed 2.0 million additional persons who were not enumerated in the 1980 census, immigration accounted for 25 percent of the increment in U.S. population. Thus, gross U.S. immigration, net immigration, and net immigration's contribution to population growth have in recent years been at or near historic high levels.[19]

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[17]Of the 1,090,924 persons admitted in 1989, 478,814 gained admission under the legalization provisions of the Immigration Reform and Control Act of 1986.

[18]The difference between the 5.6 million figure reported here and the 4.5 million figure reported in Table 1 is that the latter number refers to persons legally admitted between 1971 and 1980, whereas the former number refers to all 1970-1980 immigrants, including illegal aliens, who were counted in the 1980 census.

[19]As a fraction of U.S. population, however, immigration was far higher during the first decade of the twentieth century (10.5 immigrants per 1,000 population) than during the 1970s (2.1 immigrants per 1,000 population) (Table 2).

TABLE 24. IMMIGRATION TO THE UNITED STATES, BY DECADE, 1821–1988

Period	Number	Period	Number
1821–30	143,439	1901–10	8,795,386
1831–40	599,125	1911–20	5,735,811
1841–50	1,713,251	1921–30	4,107,209
1851–60	2,598,214	1931–40	528,431
1861–70	2,314,824	1941–50	1,035,039
1871–80	2,812,191	1951–60	2,515,479
1881–90	5,246,613	1961–70	3,321,677
1891–1900	3,687,564	1971–80	4,493,314
		1981–90	5,900,000

Source: U.S. Immigration and Naturalization Service, *Statistical Yearbook of the Immigration and Naturalization Service, 1988*, U.S. Government Printing Office: Washington, DC, Table 1

TABLE 25. POPULATION AND IMMIGRATION, 1851–1986 (millions)

Period	End-of-period Population	Total Foreign-born Population	Gross Immigration	Immigration per 1,000 U.S. Population[a]
1851–60	31.4	4.1	2.6	9.3
1861–70	39.8	5.5	2.3	6.5
1871–80	50.2	6.6	2.8	6.2
1881–90	62.9	9.1	5.2	9.2
1891–1900	76.0	10.2	3.7	5.3
1901–10	92.0	13.3	8.8	10.5
1911–20	105.7	13.7	5.7	5.8
1921–30	122.8	14.0	4.1	3.6
1931–40	131.7	11.4	0.5	0.4
1941–50	150.7	10.2	1.0	0.7
1951–60	179.3	9.3	2.5	1.5
1961–70	203.2	8.7	3.3	1.7
1971–80	226.5	14.1	4.5	2.1
1981–90	249.6	—	5.9	2.5

[a]Computed relative to the average population over a decade.

Source: U.S. Bureau of Census, *Historical Statistics of the United States, Colonial Times to 1970*, Bicentennial Edition Part 1. Washington, DC: U.S. Government Printing Office, 1975.

Even though the proportion of the change in U.S. population accounted for by immigration rose steadily in the last five decades, immigrants' share of the change in the labor force actually fell until the 1980s (Table 26). This drop was due to the increase in labor force participation rates by women and the inflow of the baby boom cohort into the labor market during this period. In addition, many immigrants entered the U.S. for family unification reasons rather than to obtain employment. However, this situation changed in the 1980s with the increased flow of immigrants. During the eighties, the share of both population growth and labor force growth consisting of immigrants reached post-war highs of 26.8 percent and 16.2 percent, respectively (Table 26). If illegal flows are included, immigrants accounted for almost 40 percent of population growth and one-fourth of labor force growth.

TABLE 26. FLOWS OF IMMIGRANTS RELATIVE TO THE POPULATION AND LABOR FORCE

Period	Immigrant Flow Share of Change: In Population	In Labor Force
Legal Flows Only		
1941–50	5.2%	7.3%
1951–60	6.9	14.5
1961–70	13.6	11.1
1971–80	19.8	9.3
1981–90	26.8	16.2
Legal and Illegal Flows		
1971–80	25.6	12.0
1981–90	38.2	23.1

Source: J. Abowd and R. Freeman, "The Internationalization of the U.S. Labor Market," (Cambridge, MA: National Bureau of Economic Research, 1990), Table 1.

Not only did the volume of U.S. immigration increase appreciably during the 1970s and 1980s, but also the source-country composition of immigration changed dramatically as immigrant origins shifted away from Europe and toward North America, Central America, and Asia. Of the 53.1 million immigrants admitted to the U.S. between 1820 and 1986, 69.2 percent came from Europe. As shown in Table 27, the dominance of Europe as a source of

U.S. immigrants has been gradually eroding for some time, but after the provisions of the 1965 Amendments to the Immigration and Nationality Act became fully effective in 1968, this dominance eroded significantly. During the 1980s, Europe was the source of only 11.5 percent of the immigrants legally admitted to the U.S., whereas Asia was the source of 45.0 percent and America the source of 40.2 percent of them.

Clearly, immigration had again become an important source of U.S. population growth. What has been unique about contemporary immigration is that the international migrants have crossed the nation's southern and western borders and settled in relatively large numbers in the South and West. Prior immigration waves were across the eastern border. Of the 5.6 million 1970–1980 immigrants, 3.4 million, or 61 percent, resided in the South and West in 1980, when these regions held 52 percent of national population.[20]

A. REGIONAL SETTLEMENT PATTERNS OF IMMIGRANTS

Using data from the 1970 and 1980 Censuses, Table 28 reports the distribution of the stock of immigrants for U.S. states, computed as a percent of the labor force. Column 3 applies a state-by-state adjustment factor for the likely undercount of illegal immigrants in the Census.[21] This table demonstrates that there is considerable diffusion of the stock of immigrants among states. As Table 29 shows, however, there is considerably less diffusion of the stock of immigrants among major metropolitan areas. Immigrants tend to account for a higher percent of the labor force in a small number of SMSAs.

Geographic concentration is greater for the flow of new immigrants than it is for the existing stock of immigrants. Table 30 shows the number of new immigrants from 1976 to 1979 who declared each of several selected SMSAs as their intended residence. The table also calculates the contribution of the flow of new immigrants as a percentage of the labor force growth in each SMSA. While these are selected "gateway" cities, the extent of geographic concentration is striking. These few SMSAs absorbed a significant percentage of all new immigrants during this period. Also, these data are not adjusted for

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[20]U.S. Bureau of the Census (1981), Table 312.

[21]See Passel and Woodrw (1984) for a discussion of this adjustment factor.

TABLE 28. IMMIGRANT PERCENT OF LABOR FORCE BY STATES, 1970 AND 1980

State	1970	1980	Adj. 1980[a]
Alabama	0.7%	1.1%	1.2%
Alaska	5.9	4.7	4.9
Arizona	5.4	6.1	6.9
Arkansas	0.5	1.1	1.2
California	11.4	16.3	19.3
Colorado	3.8	4.0	4.5
Connecticut	10.6	8.9	9.0
Delaware	2.7	3.1	3.2
District of Columbia	8.0	6.9	8.7
Florida	10.0	11.5	12.2
Georgia	1.2	1.9	2.1
Hawaii	11.4	15.3	15.2
Idaho	1.8	3.0	3.5
Illinois	7.3	8.0	8.9
Indiana	2.2	1.9	2.0
Iowa	1.8	1.5	1.6
Kansas	1.3	2.1	2.3
Kentucky	0.2	0.9	1.1
Louisiana	1.4	2.3	2.4
Maine	5.8	3.5	3.4
Maryland	4.4	5.0	5.7
Massachusetts	10.6	8.5	8.8
Michigan	6.7	4.3	4.4
Minnesota	3.1	2.3	2.4
Mississippi	0.2	1.0	1.1
Missouri	1.8	1.8	1.9
Montana	1.6	2.2	2.2
Nebraska	1.4	1.9	2.1
Nevada	6.2	7.9	8.6
New Hampshire	5.1	4.3	4.3
New Jersey	10.6	11.2	11.6
New Mexico	3.3	4.1	4.9
New York	13.9	14.8	15.8
North Carolina	0.8	1.4	1.5
North Dakota	2.7	2.0	2.1
Ohio	3.5	2.7	2.8
Oklahoma	1.1	2.0	2.3
Oregon	4.4	4.1	4.5
Pennsylvania	4.1	3.1	3.1
Rhode Island	8.8	8.8	9.0
South Carolina	0.7	1.6	1.7
South Dakota	1.2	1.3	1.3
Tennessee	1.1	1.2	1.3
Texas	3.5	6.5	7.6
Utah	2.9	4.0	4.5
Vermont	7.4	4.5	4.5
Washington	5.9	6.1	6.5
West Virginia	1.2	1.1	1.1
Wisconsin	3.3	2.5	2.6
Wyoming	1.6	1.9	2.1

[a]The adjustment is based on Passell and Woodrow (1984), Table 1, "Estimates of Undocumented Aliens Counted in the 1980 Census and Legally Resident Aliens by State of Residence and Period of Entry."

Source: J. Abowd and R. Freeman, "The Internationalization of the U.S. Labor Market," Cambridge, MA: National Bureau of Economic Research, 1990.

TABLE 29. IMMIGRANTS AS PERCENT OF LABOR FORCE OF SELECTED SMSAS

State	1970	1980
Atlanta	1.3%	2.9%
Baltimore	3.9	3.5
Boston	10.3	10.6
Chicago	10.2	11.6
Dallas-Fort Worth	2.4	4.8
Detroit	8.4	6.3
Houston	3.3	8.3
Los Angeles	13.6	24.2
Miami	27.9	41.2
New York City	18.0	24.0
Philadelphia	6.1	5.0
Pittsburgh	4.3	2.7
St. Louis	2.3	2.3
San Francisco	13.7	16.2
Washington, DC	6.0	9.0

Notes: The numerator is the number of immigrants in the labor force in the Standard Metropolitan Statistical Area indicated. The denominator is the number of individuals in the labor force in the SMSA. SMSA definitions in the 1970 and 1980 Censuses of Population were made comparable by selecting the appropriate area and subarea codes (1970) and SMSA codes (1980).

Sources: Based on individual data from the 1970 Census of Population and Housing 1/100 Public Use County Group Sample and the 1980 Census of Population and Housing Public Use Microdata A-sample. (From Abowd and Freeman, 1990.)

TABLE 30. FLOW OF IMMIGRANTS INTO SELECTED SMSAS

SMSA	Immigrants Declaring SMSA as Intended Place of Residence[a]	Change in Labor Force from 1976 to 1979[b]	Estimated Immigrant Contribution to Labor Force Growth[c]
Miami	79,099	54,233	73.3%
Los Angeles	74,515	254,000	14.7
New York City	247,052	38,000	326.8
El Paso	13,053	8,836	74.3
Newark	8,879	40,738	11.0
Washington, DC	8,359	166,193	2.5
Houston	23,868	255,367	4.7
Cleveland	3,800	38,108	5.0
Philadelphia	10,571	85,016	6.3
Dallas	10,735	220,331	2.4

Notes: [a]Number of immigrants who declared the SMSA as the intended place of permanent residence during the period from October 1, 1975 to September 30, 1979. SMSAs are listed in descending order of percent foreign born in the area.

[b]Change in the size of the labor force from 1976 to 1979, inclusive.

[c]Estimated as 50.3 percent of column one divided by column two.

Sources: Number of immigrants from the *Statistical Yearbook of the Immigration and Naturalization Service 1976 to 1979*. Change in the labor force from the Bureau of Labor Statistics Area Statistics, Employment and Earnings various issues. The immigrant labor force to immigrant population ratio was estimated from the 1980 Census of Population Detailed Population Characteristics U.S. Summary Section A-U.S. PC80-D1-A. (From Abowd and Freeman, 1990.)

illegal flows, which as Table 28 reported, would likely increase the shares for cities in California, Florida, New York, and Texas.

Bartel (1989) analyzed the 1980 geographic distribution of male immigrants aged 25–54 who arrived in the U.S. between 1975 and 1979. She found that the new male immigrants were much more likely than natives to be concentrated in the 25 largest SMSAs: While three-fourths of the new immigrants resided there, only one-half of the native population lived in these SMSAs. Of the major separate ethnic groups, Hispanic males were the most geographically concentrated: 81.4 percent were located in the top 25 largest SMSAs. Moreover, Bartel found that ethnic immigrants were more likely to be located in SMSAs in which high percentages of the relevant ethnic group already lived. Bartel tracked three cohorts after their arrival in the U.S. and found that over time the patterns of geographic concentration remained fairly stable.

Another noteworthy finding in the Bartel study is that immigrants had higher internal migration rates (between 1975 and 1979) than natives of the same ethnicity and with the same education. Asians were the most mobile of the ethnic groups, followed by Hispanics and Europeans. Immigrants who initially settled elsewhere were more likely to move to the largest SMSAs, probably in an attempt to link up with their fellow countrymen. By sharp contrast, natives were more likely to leave the 25 largest SMSAs.

B. CHARACTERISTICS OF U.S. IMMIGRANTS, 1980

By 1980 the U.S. foreign-born population from North and Central America almost equaled that from Europe (Table 31). While the foreign stock from Europe declined by 0.5 million over the decade of the 1970s, that from North and Central America increased sharply. Almost 2.2 million persons were recorded as 1970–80 immigrants from this region, about 1.3 million from Mexico and 0.5 million from the West Indies, including Cuba. Due to the 1965 Amendments to the Immigration and Nationality Act, the foreign-born population from Asia also increased significantly.[22] In 1980 almost 1.8 million U.S. residents were recorded as 1970–80 immigrants from Asia, mostly from the Philippines, Korea, and Vietnam.

A considerable difference exists in the educational composition of immigrant flows from North and Central America compared to Asia. As Table 32 shows, among 1970–80 immigrants 25 years old and over, 6.9 percent from North and Central America had at least 4 years of college compared to 37.4 percent from Asia. In general, 22.2 percent of the immigrants had 4 or more years of college compared to 16.3 percent of 1980 U.S. natives. At the other extreme, 12.8 percent of the immigrants compared to 2.9 percent of the natives had less than 5 years of elementary school. Again, distinct differences characterize Asian countries (average 7.4 percent) relative to North and Central American countries (average 21.7 percent).

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[22]Prior to the 1965 Amendments, immigration was largely determined by the "national origins" quota system that severely restricted immigration from Asian countries. Under the 1965 Amendments, which became effective after a three-year transition period, these restrictions were relaxed, so that Asians are now able to compete for U.S. immigrant status on a more equal basis with potential migrants from other nations. For more details concerning immigration law, as well as a discussion of recently proposed changes in U.S. immigration law, see Briggs (1984) and Greenwood and McDowell (1985).

TABLE 31. SOURCE REGION AND SOURCE COUNTRY COMPOSITION OF 1980 FOREIGN BORN U.S. POPULATION: SELECTED MAJOR CONTRIBUTORS (in thousands)

Region/Country	1980 Stock	Pre-1970 Immigrants Among 1980 Stock		1970–80 Immigrants Among 1980 Stock	
		Number	Percent Distrib.	Number	Percent Distrib.
Total[a]	*14,080*	*8,520*		*5,560*	
From Europe	*4,744*	*4,002*	*(47.8%)*	*742*	*(13.3%)*
U.K. and Ireland	867	721	(8.5)	146	(2.6)
Germany	849	759	(8.9)	90	(1.6)
Italy	832	732	(8.6)	100	(1.8)
From North and Central America	*4,665*	*2,512*	*(29.5)*	*2,153*	*(38.7)*
Mexico	2,199	929	(10.9)	1,270	(22.8)
Canada	843	715	(8.4)	128	(2.3)
West Indies less Cuba	651	277	(3.3)	374	(6.7)
Cuba	608	445	(5.2)	163	(2.9)
El Salvadore	94	21	(0.2)	73	(1.3)
From Asia	*2,540*	*777*	*(9.1)*	*1,763*	*(31.7)*
Philippines	501	182	(2.1)	319	(5.7)
Korea	290	47	(0.6)	243	(4.4)
China	286	150	(1.8)	136	(2.4)
Vietnam	231	5	(0.1)	226	(4.1)
Japan	222	122	(1.4)	100	(1.8)
Iran	122	19	(0.2)	103	(1.9)
From South America	*561*	*245*	*(2.9)*	*316*	*(5.7)*
Colombia	144	65	(0.8)	79	(1.4)
From U.S.S.R.	*406*	*308*	*(3.6)*	*98*	*(1.8)*
From Africa	*200*	*70*	*(0.8)*	*130*	*(2.3)*

[a]The discrepancy between the U.S. total and the sum of the major components is all other countries and country not reported. Of 1970–80 immigrants, 5.7 percent failed to report a country.

Source: U.S. Bureau of the Census, 1980 Census of Population. General Social and Economic Characteristics. Part 1. United States Summary, PC80-1-C1. U.S. Government Printing Office: Washington, D.C., 1984, Table 254.

TABLE 32. EDUCATION, ENGLISH LANGUAGE SKILLS, AND UNEMPLOYMENT RATES OF 1970–1980 U.S. IMMIGRANTS FROM SELECTED COUNTRIES: 1980

Region/Country	A	B	C	D	E
Europe	*20.4%*	*11.7%*	*76.3%*	*32.1%*	*6.7%*
Greece	10.6	9.9	65.5	35.7	7.6
Italy	8.3	17.7	63.2	38.6	9.1
U.K.	30.5	0.8	99.6	5.2	4.3
Asia	*37.4*	*7.4*	*74.8*	*27.3*	*6.2*
China	27.6	15.8	49.0	51.8	4.3
India	63.1	2.8	91.3	9.7	6.2
Korea	31.6	4.2	69.3	34.7	6.1
Philippines	47.9	5.8	91.2	9.8	4.7
Vietnam	11.9	10.4	58.6	43.6	8.2
North and Central America	*6.9*	*21.7*	*52.3*	*56.8*	*9.7*
Canada	30.0	0.9	98.6	6.0	4.4
Cuba	10.3	11.4	45.3	55.6	8.4
Dominican Republic	3.4	21.3	40.1	60.9	12.3
Haiti	9.5	10.9	70.7	30.5	13.3
Jamaica	9.7	4.0	99.4	9.6	8.8
Mexico	2.7	32.9	39.5	61.5	10.3
South America	*18.3*	*4.5*	*70.1*	*35.2*	*8.0*
Africa	*43.3*	*2.7*	*91.4*	*10.8*	*8.0*
Foreign-Born Immigrants: 1970–80	*22.2*	*12.8*	*66.1*	*40.4*	*8.1*
Foreign-Born Immigrants: Prior to 1970	*13.2*	*11.1*	*86.3*	*22.2*	*5.8*
Natives	*16.3*	*2.9*	*99.4*	*9.4*	*6.5*

Source: U.S. Bureau of the Census, 1980 Census of Population, Volume 1, Characteristics of the Population, Chapter D, Detailed Population Characteristics; Part 1, United States Summary, PC80-1-D1-A, U.S. Government Printing Office: Washington, DC, 1984, Table 255.

A: Percent of persons 25 years old and over with 4 or more years of college.

B: Percent of persons 25 years old and over with less than 5 years of elementary school.

C: Percent of persons 5 years old and over who either spoke only English at home, or if they spoke a language other than English at home, claimed to speak English "well" or "very well."

D: Percent of persons 5 years old and over who spoke a language other than English at home who claimed to speak English "not well" or "not at all."

E: 1980 unemployment rate of persons 16 years old and over.

The combination of education and English language skills importantly determines the ease with which an immigrant is assimilated into the U.S. economy. Differences between source regions in immigrant educational composition are also reflected in English language proficiency. Among 1970–80 immigrants 18 years old and over, 36.1 percent of those from North and Central America claimed to speak English either "well" or "very well" (as opposed to "not well" or "not at all") in 1980, compared to 72.7 percent of the Asian immigrants.

C. IMMIGRANTS COMPARED TO NATIVES, 1980

Differences in age and educational composition, combined with less than perfect transferability of skills to the U.S. labor market, contribute to an occupational distribution of recent immigrants that is somewhat more oriented toward less-skilled occupations, as shown in Table 33. The U.S. work force as a whole is considerably more concentrated in managerial and professional and in technical, sales, and administrative support occupations than is the new immigrant population, whereas the immigrants are more concentrated in service and in operator, fabricator, and laborer occupations. Immigrants who have been in the U.S. for a longer period have an occupational distribution that is similar to that for all U.S. workers (Table 33), which suggests either that the older immigrants had a different initial bundle of skills or that over time they were assimilated into the U.S. economy. Partially as a consequence of their concentration in less-skilled occupations, their relatively young age, and their inability to adapt immediately to the U.S. work force, the recent immigrants have higher unemployment rates than the U.S. labor force (8.1 percent compared to 6.5 percent in 1980) and somewhat lower family median income ($18,626 versus $23,092 in 1979).[23]

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[23]As is true of migrants in general, the new immigrants tend to be relatively young, with a substantial concentration in the ages 20 to 49. Consequently, immigrants aged 16 and over tend to have a higher labor force participation rate than the corresponding population as a whole (64.4 percent in 1980 for 1970-80 immigrants compared to 62.0 percent in 1980 for the U.S.).

TABLE 33. 1980 OCCUPATIONAL DISTRIBUTION OF ALL U.S. WORKERS, PRE-1970 IMMIGRANTS, AND 1970–80 U.S. IMMIGRANTS (16 and Over)

Occupation	All Workers	Pre-1970 Immigrants	1970–1980 Immigrants
Managerial and Professional Specialty	22.7%	23.4%	17.7%
Technical, Sales and Administrative Support	30.3	26.9	21.0
Service	12.9	14.8	18.0
Farming, Forestry, and Fishing	2.9	2.6	4.1
Precision Production, Craft and Repair	12.9	13.7	11.8
Operators, Fabricators, and Laborers	18.3	18.7	27.3
All Occupations	100.0	100.0	100.0
Total Workers (thousands)	97,639	3,991	2,541

Source: U.S. Bureau of the Census, *1980 Census of Population. Detailed Population Characteristics.* Part 1. United States Summary, PC80-1-D1-A. U.S. Government Printing Office: Washington, DC, 1984, Table 255.

Two other comparisons between immigrants and natives are particularly relevant in the context of this study, namely, gender and age. The 1980 census also allows a detailed comparison between various cohorts of immigrants (e.g., 1970–80 and before 1970) and natives by these characteristics. Table 34 reports gender differences and Table 35 reports differences in the age distributions of the various populations.

With regard to gender, the most notable observation in Table 34 is that the foreign born who entered the U.S. prior to 1970 have a higher concentration of women than those who entered between 1970 and 1980. Moreover, the older immigrant entry cohort also has a substantially higher concentration of women than the non-foreign born (55.7 percent compared to 51.3 percent). The difference in the gender composition between natives and those immigrants who entered before 1970 appears to be due mainly to two factors:

TABLE 34. GENDER COMPOSITION OF U.S. NATIVE AND FOREIGN-BORN POPULATIONS: 1980

	Males	Females
All Persons	48.6%	51.4%
Non-Foreign Born	48.7	51.3
Foreign Born Entered Before 1970	44.3	55.7
Foreign Born Entered 1970–80	50.4	49.6

Source: Calculated from data presented in U.S. Bureau of the Census. *Detailed Characteristics, United States Summary Section A: United States,* PC80-1-D1-A (Washington, DC: U.S. Government Printing Office, 1984), Table 255.

TABLE 35. AGE COMPOSITION OF NATIVE AND FOREIGN-BORN PERSONS, 1980

	Native	Foreign Born Entered Before 1970	Foreign Born Entered 1970–80
Under 14 years	23.5%	1.4%	20.2%
15 to 19 years	9.6	3.6	10.1
20 to 24	9.5	4.9	14.1
25 to 34	16.3	12.3	28.6
35 to 44	11.1	15.8	13.6
45 to 54	9.9	15.2	6.5
55 to 64	9.6	13.8	3.7
65 years and over	10.6	32.9	3.2
All Persons	100.0	100.0	100.0

Source: Calculated from data presented in U.S. Bureau of the Census. *Detailed Population Characteristics, United States Summary Section A: United States*, PC80-1-D1-A (Washington, DC: U.S. Government Printing Office, 1984), Table 255.

(1) older immigrant cohorts from the more recent past were composed of relatively high percentages of women, and (2) greater female life expectancy among older immigrant cohorts from the more distant past.

The age distribution of the foreign born who entered before 1970 differs considerably from that entering between 1970 and 1980, and each in turn differs considerably from the distribution of natives (Table 35). First, the foreign born who entered before 1970 of course had no one aged 0 to 9 in 1980. The 1.4 percent contribution of those under 14 years of age is entirely due to persons 10 to 14. Almost one-third of the older entry cohort is made up of persons 65 years of age and over, which importantly reflects the aging of immigrants who came to the U.S. before entry barriers were erected in 1924. Among the 1970–80 immigrant cohort, the relatively high concentration of persons 20 to 34 years old (42.7 percent compared to 27.4 percent for natives) reflects the relative high migration propensities of persons of this general age and also reflects the job-seeking behavior of this group. Finally, the concentration of older persons in the 1970–80 cohort is substantially less than for natives (6.9 percent 55 years older and over compared to 20.2 for natives).

D. ANNUAL CHANGES IN IMMIGRANT GENDER, AGE, AND SKILL COMPOSITION, 1972–1986

The immigration patterns described above were based primarily on 1980 census data. Consequently, with the possible exception of examining specific entry cohorts of immigrants, changes over time in the various patterns could not be traced in any detail. In this section of the paper, we use Immigration and Naturalization Service data to examine the changing gender, age, and skill composition of U.S. immigrants over the 1972–1986 period.

For some years the gender composition of legal U.S. immigration has been shifting away from women and toward men. In 1976 46.4 percent of U.S. immigrants were male, but 12 years later 50.0 percent were male (Table 36). The shift in gender composition was coincident with a shift in the age composition of both male and female immigrants. The percentage of males 20 to 49 years of age increased from 54.6 percent in 1970 to 60.9 percent in 1988 (Table 37). Between 1970 and 1988, the percentage of males who were children 9 years old and less fell considerably from 19.0 percent to 10.8 percent, whereas the percentage 50 and over increased modestly from 8.0 percent to 12.1 percent.

TABLE 36. GENDER COMPOSITION OF U.S. IMMIGRATION: 1970–1988

Year	Percent Male of Total	Percent Female of Total
1970	47.41%	52.59%
1971	46.57	53.43
1972	46.72	53.28
1973	46.57	53.43
1974	46.73	53.27
1975	46.80	53.20
1976	46.38	53.62
1977	46.86	53.14
1978	47.61	52.39
1979	47.79	52.21
1980	47.9[a]	52.1[a]
1981	47.6[a]	52.4[a]
1982	50.29	49.71
1983	50.65	49.35
1984	50.54	49.46
1985	50.20	49.80
1986	49.99	50.01
1987	49.91	50.09
1988	50.47	49.53

[a]Figure is drawn from the INS Microdata Tapes and does not include refugees.

Source: Immigration and Naturalization Service, *Statistical Yearbook of the Immigration and Naturalization Service*, various years.

TABLE 37. AGE COMPOSITION OF MALE IMMIGRANTS TO THE U.S.: 1970–1980
(in percent)

Year	under 5	5–9	10–19	20–29	30–39
1970	9.08%	9.94%	18.46%	24.49%	20.13%
1971	8.80	10.06	18.58	25.63	19.87
1972	8.67	9.69	18.24	27.54	19.42
1973	8.70	9.57	19.58	27.96	17.69
1974	8.44	9.62	20.84	28.12	17.22
1975	8.22	9.16	20.35	27.51	17.47
1976	7.86	8.56	19.09	28.21	17.81
1977	6.47	7.58	19.23	26.53	18.03
1978	6.10	9.30	20.04	27.33	18.88
1979	6.43	8.22	19.27	28.55	18.68
1980	na	na	na	30.8[a]	19.4[a]
1981	na	na	na	26.2[a]	20.1[a]
1982	5.92	8.38	20.19	30.02	18.22
1983	5.84	7.53	18.86	31.70	19.24
1984	5.73	7.03	18.55	31.26	19.75
1985	5.59	6.78	17.73	31.38	20.30
1986	5.53	6.80	17.63	29.44	21.02
1987	5.35	6.39	17.30	28.67	21.33
1988	4.73	6.03	16.26	26.89	22.52

Year	40–49	50–59	60–69	70–79	80+
1970	9.93%	4.64%	2.44%	0.73%	0.15%
1971	8.84	4.55	2.67	0.85	0.17
1972	8.35	4.21	2.68	0.98	0.22
1973	8.16	4.32	2.80	1.00	0.21
1974	7.76	4.12	2.70	0.98	0.20
1975	8.31	4.64	3.04	1.09	0.22
1976	8.20	5.02	3.57	1.37	0.29
1977	9.44	6.01	4.27	1.97	0.48
1978	8.90	4.92	3.08	1.21	0.26
1979	8.44	5.12	3.58	1.47	0.24
1980	7.3[a]	4.3[a]	3.3[a]	na	na
1981	8.3[a]	4.6[a]	3.4[a]	na	na
1982	7.96	4.55	3.18	1.33	0.25
1983	7.89	4.45	3.07	1.20	0.23
1984	8.18	4.76	3.26	1.25	0.22
1985	8.36	4.81	3.44	1.36	0.24
1986	8.72	5.23	3.80	1.51	0.32
1987	9.66	5.61	3.94	1.44	0.29
1988	11.48	6.33	4.05	1.41	0.32

na = Not available.

[a]Figure is drawn from the INS Microdata Tapes and does not include refugees.

Source: Immigration and Naturalization Service, *Statistical Yearbook of the Immigration and Naturalization Service*, various years.

While males 20 to 49 were increasing as a fraction of total male immigration, women in the same age class were decreasing relatively (Table 38). The fraction of female immigrants accounted for by this age group decreased from 61.2 percent in 1972 to 58.4 percent in 1988. The decrease for women 20–29 was particularly high—from 37.0 percent in 1972 to 27.3 percent in 1988. Female immigrants 50 and over increased from 9.2 percent 1970 to 15.2 percent in 1988.

Table 39 reports four broad occupational categories for immigrants who were not refugees. Occupation not reported includes persons under 16 years of age, as well as persons who had no occupation or chose to report none. These data are also from the INS Public Use Tapes. The years 1980–1983 are not absolutely comparable with other years due to missing information. Nevertheless, some general trends are apparent in the data. The fraction of immigrants who claimed to be professional, technical, and kindred workers has declined, whereas those who are managers and proprietors (except farm) has increased. The fraction who are craftspersons has also declined. Those who are laborers has increased. In general, a slight shift appears to have occurred from the more skilled to the less skilled occupations.

TABLE 38. AGE COMPOSITION OF FEMALE IMMIGRANTS TO THE U.S.: 1970–1980 (in percent)

Year	under 5	5–9	10–19	20–29	30–39
1970	7.96%	8.70%	18.25%	33.67%	16.67%
1971	7.56	8.53	17.95	35.81	16.58
1972	7.61	8.24	17.42	37.02	16.15
1973	7.85	8.18	18.36	36.35	15.32
1974	7.55	8.27	19.24	35.71	15.32
1975	7.42	7.97	18.50	34.61	15.56
1976	7.12	7.30	17.28	36.21	15.50
1977	5.96	6.17	17.24	32.17	16.44
1978	5.66	8.00	18.10	32.45	17.42
1979	5.91	7.26	18.05	32.27	17.31
1980	na	na	na	31.7[a]	17.4[a]
1981	na	na	na	28.8[a]	18.3[a]
1982	6.03	7.80	18.60	28.63	17.18
1983	6.34	7.14	17.98	28.79	17.96
1984	6.19	6.77	17.70	28.40	18.37
1985	5.94	6.46	16.88	29.77	18.47
1986	5.69	6.40	16.75	28.72	18.88
1987	5.54	6.08	16.41	28.55	19.33
1988	4.94	5.85	15.58	27.27	20.38

Year	40–49	50–59	60–69	70–79	80+
1970	8.85%	4.89%	3.06%	1.03%	0.23%
1971	8.37	5.14	3.25	1.17	0.25
1972	8.04	4.99	3.44	1.36	0.30
1973	7.97	5.38	3.59	1.35	0.31
1974	7.83	5.19	3.65	1.31	0.31
1975	8.18	5.86	4.18	1.55	0.34
1976	7.98	6.39	4.83	1.86	0.41
1977	9.38	7.30	5.90	2.58	0.67
1978	8.65	6.21	4.28	1.72	0.46
1979	8.75	6.66	4.73	1.41	0.38
1980	7.7[a]	6.2[a]	4.5[a]	na	na
1981	8.1[a]	6.1[a]	4.3[a]	na	na
1982	8.21	6.30	4.60	1.92	0.40
1983	8.39	6.39	4.28	1.62	0.36
1984	8.70	6.72	4.51	1.72	0.31
1985	8.49	6.76	4.74	1.85	0.41
1986	8.74	7.13	5.22	2.04	0.44
1987	9.47	7.26	5.13	1.85	0.38
1988	10.73	7.60	5.26	1.92	0.46

na = Not available.

[a]Figure is drawn from the INS Microdata Tapes and does not include refugees.

Source: Immigration and Naturalization Service, *Statistical Yearbook of the Immigration and Naturalization Service*, various years.

TABLE 39. PERCENTAGE OF NONREFUGEES IN VARIOUS SKILL CLASSES AND WHO REPORTED NO OCCUPATION, 1972–1986

Year	Professional Technical, and Kindred	Managers and Proprietors	Crafts-persons	Laborers	No Occupation Reported
1972	13.4	2.0	12.4	12.5	59.7
1973	10.7	2.3	12.6	12.5	61.8
1974	9.3	2.4	13.0	13.0	62.3
1975	10.4	2.7	14.6	10.3	62.0
1976	10.7	3.0	14.3	9.9	62.1
1977	10.8	4.1	15.9	9.9	59.3
1978	8.8	4.0	16.8	11.9	58.5
1979	8.6	4.2	16.2	10.9	60.2
1980[a]	7.5	3.6	13.7	8.9	48.9
1981[a]	6.8	3.4	15.4	10.4	51.3
1982[a]	9.4	4.3	14.5	11.0	55.9
1983[a]	8.1	4.2	10.4	17.5	54.9
1984	8.0	4.3	10.4	17.9	59.3
1985	8.4	4.2	10.7	17.8	59.0
1986	8.0	4.1	10.0	17.8	60.1

[a]Percentages for 1980–83 do not add to 100.0 due to missing occupational information on individual records.

Source: INS Public Use Tapes.

XI. SUMMARY AND CONCLUSIONS

This paper has attempted to report on regional population trends and projections, and on trends in immigration for the U.S. The following points summarize some of the salient facts presented above:

1. The mobility of the population, including the youth population, has decreased in recent years;

2. Net migration rates are expected to slow even further in the next two decades;

3. Population and employment shifts to the South and West will slow in future decades compared to the last two decades;

4. Despite this slowdown, in the next two decades over 90 percent of the net increase in population still will occur in the South and West;

5. Over one-half of the growth in the South will be due to migration, whereas a disproportionate share of growth in the West will be accounted for by immigrants;

6. Because population shifts and changes in employment growth are interdependent, regions experiencing the most rapid population growth will also tend to experience the most rapid economic growth;

7. The proportion of the population aged 18–24 will drop until 1995, then grow slowly afterward; however, growth of this age group will be more rapid in the South and West regions;

8. Nationwide, economic and employment growth rates will remain fairly high until 1995 when they will begin a steady decline until 2010. Employment growth after 2000 will slow considerably.

9. Regions in the Rustbelt will experience rates of employment and economic growth that fall below the national average, while regions in the Sunbelt will experience above-average growth.

10. In the 1980s, legal immigration accounted for nearly 27 percent of the increase in the U.S. population and 16 percent of the increase in the labor force; if illegal immigrants are counted, these percentages are 38 and 23, respectively;

11. New immigrants tend to be more geographically concentrated than natives; three-fourths of new immigrants lived in the 25 largest SMSAs in 1980, whereas only one-half of natives lived in these SMSAs.

12. Because of slow rates of natural population increase, aging of the U.S. population, and public policy favoring immigration, it is expected that the contribution of immigrants to future growth of the population and labor force will increase;

13. The contribution of new immigrants to population and labor force growth will be the highest in the South and West and in the largest metropolitan areas, especially the "gateway" metropolitan areas.

The effects of these patterns and trends on Army recruiting can be measured both directly and indirectly. The direct effects are obvious: As the population grows at differential rates across geographic areas, or migrates across areas, recruiting markets shift accordingly. Also, population and migration flows and changes in regional economic conditions tend to be highly correlated, and mutually reinforcing. Individuals migrate in response to perceived differentials in economic benefits and in turn create differential regional growth patterns. All else equal, areas that expect to experience significant in-migration will find the recruitable population growing. This effect, however, may be offset by the strong employment conditions that normally characterize areas of high in-migration.

A major issue that must be addressed is the sensitivity of recruiting to population changes. A number of empirical studies have addressed this issue and a recent survey (Goldberg, 1982) found that the estimated enlistment elasticity varied from .13 to .65. This finding suggests that population changes have a fairly small effect on enlistments. However, these elasticities were obtained from national enlistment supply models, which represent the *average* effect of population changes across regions. To predict the differential effect of changes in population (and other factors), what is needed are separate enlistment supply models for individual regions, such as recruiting brigades or battalions.[24]

Where, then, should recruiting resources be concentrated: In areas of rapid growth and high in-migration, or in slow-growth or declining areas with high out-migration? Obviously, recruitment will tend to be more difficult in areas where the youth population is declining rapidly, regardless of the reason for the decline. But ultimately it is an empirical issue as to which areas provide the more fertile recruiting markets, and one that has not been

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[24]Goldberg (1987) attempts to estimate a battalion-level forecasting model.

addressed adequately in the manpower supply literature. While this literature has successfully estimated the supply impact of regional variation in civilian pay and unemployment, neither the connection between these conditions and migration, nor the direct effect of migration have been investigated.[25] This remains a task for future research.

The indirect effects of regional population shifts occur via the effects on civilian labor markets. An important area in which these effects are not well understood is how immigrants affect the critical youth labor market, and how this effect varies across local areas. In particular, what needs to be investigated is whether immigrants are substitutes for young adults in entry-level jobs. The data reported in Section X showed that the flow of immigrants tends to be concentrated regionally. Although previous research has found that the economy-wide impact of immigration tends to be positive, it also indicates that an increase in the number of immigrants depresses the average wage of native workers by a small amount. Native workers' wages are reduced the most in local labor markets in which immigrants are a significant share of the labor force.

Further evidence supports the view that immigrants may be substitutes for native youth. Immigrants typically are young adults, just beginning their careers. They are also considerably younger than the native population: 22.6 percent are aged 15–24 versus just 15 percent of natives in this age group. Empirical evidence, although meager, suggests what one would suspect from this data: Immigration has a strong negative effect on youth wages, especially minority youth, and a weak negative effect on youth employment.[26]

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[25]The only exceptions to this are two studies dealing with the Reserves (Mehay, 1990; 1991). In the first, Mehay (1990) estimates a supply model for the U.S. Army Reserve and includes a variable for the out-migration rate for each of over 900 U.S.A.R. market areas. The out-migration variable was often found to be positively associated with enlistment rates. In the second, Mehay (1991) produces evidence that the migration behavior of individual Reservists tends to mirror that of civilians.

[26]Greenwood and McDowell (1986) survey the labor market consequences of immigration. Few studies in the literature have examined the impact of undocumented aliens, who tend to be even younger than legal immigrants and who are heavily concentrated in low-wage, low skill entry level jobs for which native youth often compete. Thus, undocumented immigrants may be closer subsitutes for native youth.

Past federal policy has been an important determinant of how immigrants affect labor markets. Since 1965, policy has encouraged family reunification. By 1987, less than four percent of immigrants were admitted to the U.S. because of their skills or occupation. On balance it appears that in recent decades the increased proportion of immigrants—both legal and illegal—who are unskilled has increased the competition for entry level jobs with native youth. This effect presumably drives down wages and makes military enlistment a more attractive alternative for native youth.

Recently, Congress has come to agree with analysts who argue that the U.S. admits the "wrong" immigrants (Borjas, 1990). Decision makers also have become worried about the possibility that future shortages of skilled workers will impede the nation's economic growth and harm our ability to compete in global markets. These problems have prompted new legislation that would increase the proportion of immigrants who possess significant work skills. Such workers will not be as likely to compete with native youth for low-skill, entry-level jobs. This should reduce the substitution for young workers and raise youth wages, especially if future job shortages become acute. Unfortunately, the military may become a less desirable option under this set of circumstances. A complicating factor is at work, however. Policy makers are also concerned about the aging of the U.S. work force and have liberalized the immigration laws to admit a larger number of immigrants. An increase in the total supply of immigrants will tend to offset the effect of increasing the proportion who are skilled.

Immigration currently accounts for approximately 27 percent of U.S. population growth, and is expected to account for an even greater share in the future. Thus, it is important that manpower planners monitor trends in the number of immigrants, their ages, skills and training, and the regional distribution.

One final important point should not be overlooked: How the numerous demographic and economic changes and projections detailed in this report are likely to affect regional recruiting patterns depends not just on regional population sizes and composition, but also on the qualifications and propensity of that population. Table 40 shows that the estimated proportion of youth in each region that would have qualified for military enlistment. These estimated qualification rates are the lowest in the South and West. However,

TABLE 40. ESTIMATED PERCENTAGE OF YOUTH (Ages 18–23) QUALIFYING FOR ENLISTMENT BY REGION AND BRANCH (1981)

Region	Army	Navy	Marine Corps	Air Force
Northeast	81.4	72.4	64.8	66.9
Midwest	81.9	71.1	64.5	66.6
West	78.3	67.3	61.4	62.9
South	70.0	58.4	51.0	52.9
Total	77.3	66.6	61.5	59.6

Source: Mark J. Eitelberg, et al., "Screening for Service: Aptitude and Education Criteria for Military Entry." (Washington, DC: Office of Assistant Secretary of Defense, September 1984.)

these lower qualification rates in the past have been offset by higher military propensity in those two regions. Table 41 shows the percentage of respondents who indicated positive propensity for one or more of the military services, termed the "composite active propensity on the Youth Attitude Tracking Survey (YATS)." A respondent with a positive propensity is defined as one who responds "definitely" or "probably" to the question of how likely are they to be serving on active duty in one of the military branches. The

TABLE 41. COMPOSITE ACTIVE PROPENSITY BY AGE AND REGION (percent)

	Region				
Age	Northeast	Midwest	South	West	Total U.S.
16	38.1	39.5	44.6	42.0	41.5
17	31.3	31.8	41.1	36.9	35.8
18	24.5	26.9	33.1	26.9	28.4
19	23.4	23.5	29.2	21.4	25.1
20	17.3	16.2	25.9	18.9	20.2
21	17.1	13.8	22.3	19.9	18.7
Total	27.8	28.4	35.5	30.8	31.1

Source: Defense Manpower Data Center.

propensity is calculated from a pooled sample of respondents from the annual YATS surveys for the 1984–1988 period. The pooled data is necessary to obtain sample sizes sufficiently large to provide reliable regional estimates. As Table 41 reveals, the South has the highest positive propensity (35.5 percent), followed by the West (30.8 percent), the Midwest (28.4 percent), and the Northeast (27.8 percent).

Table 42 tabulates regional military propensity by aptitude. Low aptitude individuals are those who score in categories IIIB–V (percentiles 1–49) on the Armed Forces Qualifying Test, while high aptitude are those scoring in categories I–IIIA (percentiles 50–99). The aptitude levels are predicted for each region and propensity group. Table 42 shows that propensity is lower among high-aptitude males, and higher among low-aptitude males. Among high aptitude males, propensity is higher in the South and the West. It appears that, in the South and West, overall military propensity and the propensity among high aptitude individuals has compensated for the lower qualification rates in those regions.

TABLE 42. COMPOSITE ACTIVE PROPENSITY BY APTITUDE AND REGION (percent)

	Region				
Predicted aptitude[a]	Northeast	Midwest	South	West	Total U.S.
Higher aptitude	21.2	22.0	25.5	24.3	23.3
Lower aptitude	37.7	37.1	44.1	39.1	40.4
Total	27.8	28.4	35.5	30.8	31.1

[a]Higher aptitude is defined as the predicted probability of scoring in Categories I–IIIA (percentiles (50–99) of the Armed Forces Qualification Test. Lower aptitude is defined as predicted probability of scoring in Categories IIIB–V (percentiles 1–49).

Source: Defense Manpower Data Center (1991).

Table 43 provides information on regional enlistment propensities by race and ethnicity. Nationwide, positive propensity is much higher for Blacks, Hispanics and "others" (Asians, Pacific Islanders, American Indians, and Alaskan Natives) than for whites. But the minority group with the highest positive percentage varies across regions. In the Northwest, Hispanics have

the highest positive propensity (50.4 percent), followed by Blacks (47.5 percent). In the South, Blacks have the highest propensity (57.2 percent). In the West, the "other" category has the highest propensity (45.3 percent), followed by Hispanics (42.4 percent).

TABLE 43. COMPOSITE ACTIVE PROPENSITY BY RACE/ETHNICITY AND REGION (percent)

Race/Ethnicity	Region				Total U.S.
	Northeast	Midwest	South	West	
White	23.2	25.8	28.6	25.8	26.1
Black	47.5	43.1	57.2	34.5	50.9
Hispanic	50.4	43.0	46.8	42.4	45.2
Other	37.4	45.1	35.8	45.3	42.0
Total	27.8	28.4	35.5	30.8	31.1

Source: Defense Manpower Data Center (1991).

That Hispanics have a high positive propensity in the West and South has both positive and negative aspects for recruiting. On the negative side, military qualification rates tend to be relatively low for Hispanics. On the positive side, the growth rate of the Hispanic population is far outpacing that of whites. Even if qualification rates remain the same, Hispanics in the West and South will provide a large pool of potentially recruitable youth in the early years of the 21st century.

Yet another factor must be considered, however. Due to slowing internal migration and birth rates, it is predicted that much of the West's population growth will consist of immigrants from abroad. A significant share of immigrants to the West have come from Central America, especially Mexico, and many of these are undocumented. Immigrants from these nations historically have had low skill and education levels. A significant portion do not possess the educational backgrounds or language skills necessary for military enlistment.

Concerns over future National "educational shortfalls" have been expressed by numerous observers. The lack of preparation of minority groups

is highlighted by differentials in unemployment rates. In 1988, the unemployment rates for blacks and Hispanics aged 16–24 were 56 and 46 percent greater than whites, respectively (Bureau of Labor Statistics, 1989). Also, high school completion rates for blacks and Hispanics aged 18–19 are significantly below those of white youths. To the extent that minority groups, principally Hispanics, are unevenly distributed regionally, the *qualified* recruitable population will change more in some areas than in others. Future recruiting policies may need to be tailored to address these issues, both at a National and a regional level.

How will the trends identified in this report affect regional patterns of Army recruiting in the 21st century? Quantifying the precise magnitude of the various trends is a difficult, if not impossible, task. However, Table 44 presents a taxonomy of the likely *direction* of the effects of various trends and projections. Entries with a question mark indicate either the trend has opposing effects and the net effect is unknown, or that no research has been completed on the enlistment effect. Entries with a zero indicate the trend is expected to have a minor effect.

TABLE 44. TAXONOMY OF THE EFFECT OF VARIOUS TRENDS ON RECRUITING

Trend	Region			
	Northeast	Midwest	South	West
Distribution of Youth Population	–	–	+	+
Employment and Economic Growth	+	+	–	–
Net Migration Flows	?	?	?	?
Falling Migration Propensity	+	+	+	+
Distribution of New Immigrants	+	0	+	+
ΔPropensity	?	?	+	+
ΔQualifications	?	?	–	–

Source: Authors.

Some of the trends have multiple effects and the magnitude of each is not easily measured. For example, the flow of new immigrants is expected to be greater in the South and West. If, as previous research indicates, immigrants are substitutes for native youth, the effect will be to boost enlistments. On the other hand, immigrants who normally are not enlistment candidates are expected to account for a growing share of new population growth. Moreover, immigrants in the South and West are often handicapped by language problems. Table 44 attempts to weigh these opposing tendencies and provide the most likely direction. It appears that, on balance, the trends discussed will be positive in the South and West. The effects are more uncertain in the Northeast and Midwest.

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